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**Are the European financial institutions climate  
proofing their investments**

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## List of acronyms

ADB	Asian Development Bank
AFD	Agence Française de Development (French development bank)
AfDB	African Development Bank
BFI	Bilateral financial institution
BSTDB	Black Sea Trade & Development Bank
CEB	Council of Europe Development Bank
EIA	Environmental Impact Assessment
EBRD	European Bank for Reconstruction and Development
EC	European Commission
EFI	European Financial Institution
EIB	European Investment Bank
EU	European Union
FMO	Netherlands development bank
GHG	Green House Gases
IFC	International Finance Corporation
IPCC	Intergovernmental Panel on Climate Change
KfW	KfW Entwicklungsbank (German development bank)
MFI	Multilateral financial institution
NGO	Non-governmental organization
NEFCO	Nordic Environment Finance Corporation
NEFI	Non-European multilateral financial institution
NIB	Nordic Investment Bank
OECD	Organization for Economic Co-operation and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
WB	World Bank

# 1 Introduction

## 1.1 Background

Prevailing consensus is that climate change is one of the most urgent global problems today. It poses threats not only to the environment but to society and to the economy as well (Pielke 1998) (Parry *et al.* 2005). Climate change increases land and sea temperatures and alters precipitation patterns, resulting in the increase of sea levels, risks of coastal erosion and an expected increase in weather related natural disasters. Changing water levels, temperatures and flow will in turn affect food supply, health, industry and transport (EU 2009). Climate change can be addressed in two ways: One is mitigation – severely reducing greenhouse gas emissions (GHGs) and the other is adaptation – taking actions against the unavoidable impacts of climate change. While previously thought to be something to be avoided in the future via mitigation, science shows that climate change impacts are already occurring and that they are increasing in frequency (Parry *et al.* 2005)(IPCC 2001). Even if the world succeeds in limiting and then reducing GHGs to pre-1990 levels, as called for in the 1997 Kyoto Protocol, the impacts of climate change will be felt for at least the next 50 to 100 years (Bouwer & Aerts 2006)(EC 2009)(Parry *et al.* 2008). This makes adaptation increasingly relevant and urgent (Pielke 1998) (Parry *et al.* 2005).

Although mitigation and adaptation can both be pursued effectively to address climate change, mitigation historically has received more focus from climate change experts both in the policy and scientific sectors (Füssel & Klein 2006). However, since the IPCC's Third Assessment Report, the issue of adaptation has become recognized as an important response to climate change and according to Parry *et al.* (2005, pg. 2-3) "has finally emerged as a legitimate – and in some cases urgent – policy priority". Thus, the need to adapt to climate change has become widely accepted, as seen by UNFCCC's adoption of a 5-year program to help countries better prepare for adaptation decisions (Urwin & Jordan 2008)(SBSTA 2005). The European Union (EU) via the European Commission (EC) has issued similar programs including a Green Paper (EU 2007a) and a White Paper (EU 2009) on adaptation.

The White Paper brings adaptation to the forefront of the EU agenda. The EU anticipates increased climate variability both in and outside its borders. For example, within the EU, the Arctic and the Mediterranean basin are vulnerable to climate change impacts and outside, developing countries are particularly at risk (EEA *et al.* 2008)(EU 2009). Additionally, climate change could impact a number of key EU sectors such as agriculture and infrastructure (EU 2009). The White Paper provides a framework to reduce both the EU's and developing countries vulnerability to these impacts. The intention is to complement actions taken by Member States to increase their resilience to climate change risk and to support international adaptation efforts outside the EU (EU 2009).

The EU realizes that to achieve the aggressive and diverse climate change goals it has set out for itself and member states, climate action needs to be mainstreamed across policy and sectors (Parry *et al.* 2005)(EU 2009)(RESPONSES 2009). The RESPONSES Project was formed in this context. RESPONSES is a three-year project sponsored by the European Commission, DG Research, under the 7th Framework Programme for Research. The main objective of the project is to evaluate the performance of current EU policies and actions with regard to their contribution to climate change objectives, and, where needed, to develop new options that have the potential to achieve emission



reductions and/or reduce the vulnerability to climate change impacts (RESPONSES 2009).

There are many policies, sectors and institutions that contribute to the EU's climate change objectives and which fall under the RESPONSES project. For example, with respect to adaptation, infrastructure is a key focus sector of the White Paper framework. Although this sector is mainly in the domain of the Member States, the EU has influence over many practices. One way is via the setting of construction standards and funding parameters (EU 2009). For example, the White Paper (EU 2009 p.12) states "infrastructure projects which receive EU funding should take climate-proofing into account". European financial institutions (EFIs), such as the European Investment Bank (EIB) and the European Bank for Reconstruction and Development (EBRD) provide funding for infrastructure (€5.8 billion in 2009) and other focus sectors of the White Paper. Further, the stated policies of these EFIs are consistent with the climate policies of the EU in order to ensure coherence when investing in the EU and climate proof development when providing financing in developing countries (EIB 2010b)(EBRD 2010b). Therefore, these EFIs could potentially play a significant role in supporting and enhancing the EU's climate change policies and position.

Financial institutions like the EIB will play a key role in mobilizing the financial flows needed for adaptation to climate change in the EU and developing countries (EU 2010). Whereas mitigation has long been on the policy agendas of the EU and the EFIs, adaptation is relatively new (Biesbroek *et al.* 2010). For example, as recently as 2007, the EIB and EBRD anticipated that their regions of operation would be less vulnerable to adaptation issues than other regions in the world where climate change may have a very significant impact. Accordingly, the focus of their work, at that time, was on mitigation rather than adaptation (AFDB *et al.* 2007). However, faced with increased climate change risks in the EU (EEA *et al.* 2008) and the emphasis the EU is now placing on adaptation in its policy efforts (EU 2009), are the EFIs keeping pace? To help answer this question, this report will explore the European financial institutions policies and actions with respect to adaptation.

### 1.2 Research question

In the past, EFI's investment projects and programs were designed and implemented based on historical climate conditions. Additionally, in the past, it has been argued by financial institutions that the impacts from climate change are not expected for at least another 20 years (Fankhauser *et al.* 1999) so, therefore, they occur outside the term of the investment and do not need to be addressed. However, given the evidence that climate change is already occurring (Parry *et al.* 2005)(IPCC 2001), planning for likely climate change impacts should be included not only via direct adaptation projects but also mainstreamed into planning and development strategies as well as into future investment decisions of the EFIs (Fankhauser *et al.* 1999). Climate proofing current and future investments - making them more resilient to climate change - could be one step in achieving that goal. Therefore, the main question of this research project is: ***To what extent are the European financial institutions climate proofing their investments?***

In order to answer this question the following sub-questions are addressed:

1. What is climate proofing? – The literature uses this term extensively, with few definitions found in the academic journals. Therefore, via literature and interviews, this report will investigate if there is an understood definition among those active in climate change.

2. Who are the European financial institutions? – What are their mandates and how and where do they operate?
3. How can climate proofing be achieved? – Are there tools or guidelines which are available to aid the institutions in climate proofing; and if so, when and where can they be used?
4. What are the current policies of the EFIs? – To what extent do their current policies and planning processes consider climate change risk?
5. Are the European financial institutions leaders in climate proofing? – The EU is eager to project itself as a leader in climate change policy (Adelle *et al.* 2008). In this respect, are the EFIs acting as leaders in the context of climate proofing?

### 1.3 Methodology

As described in the previous section, this study examines the current investment policies and planning activities of the European financial institutions in the context of climate proofing for adaptation. To accomplish this, a three step process was undertaken. First, relevant academic literature was reviewed. Second, various websites and other gray literature were examined for more detailed information and, lastly expert interviews were conducted. These steps are described in more detail below.

The initial literature search was focused was on peer reviewed academic journals using key words such as “climate proofing”, “mainstreaming”, “climate change risk assessment”, “adaptation”, “Multi-lateral banks” and “development banks”. While there was much to be found on the general topics of climate proofing and adaptation, as well as the role of EFIs in funding responses to climate change, there were limited writings on the subject of the EFIs and their work with respect to climate proofing and climate risk assessment. Thus, the search was expanded to include gray literature. Research reports from established institutions such as the IPCC, OECD, NGOs and consultants were reviewed. Additionally, various websites were viewed, including those of the EFIs, which yielded additional relevant information.

From the literature review it became apparent that detailed information on the EFI’s activities regarding climate risk management was minimal, therefore expert interviews were conducted to provide more specific information. The initial targets for interviews were chosen based on contacts from experts in the environment field such as C. Haug LL.M and Drs. L. Bouwer, advisors to this study. Additional relevant institutions and contacts were identified during the interview process. See Annex 1 for a list of the EFIs and other institutions and organizations that participated in the study. The purpose of the interviews was to gain more detailed information regarding the EFIs’ current climate risk assessment policies and planning procedures. Additional questions were asked in order to assess if there were common definitions for the terms mainstreaming and climate proofing among the EFIs. See Annex 2 for a list of the interview questions. Two non-European multilateral financial institutions (NEFIs) and one commercial social bank were interviewed. Their answers were used for a comparison when answering the sub-question regarding leadership of the EFIs. Two non-governmental organizations (NGOs) were also interviewed to provide an outsider’s perspective on the EFIs’ climate proofing activities. All interviews are confidential. No individual responses have been identified and only composite views have been reported.

## 1.4 Limitations of the research

As mentioned above, one limitation of the research is the lack of academic articles. This gap was filled from the gray literature of established institutions and primary data from the interviews. A second limitation is that given the time constraints of the study, only a limited number of EFIs were interviewed which may not be a representative sample of the European financial institutions. Additionally, this study only looks at climate proofing with respect to adaptation and does not include mitigation.

This paper contributes to the RESPONSES Project by providing a baseline on the status of EFIs with respect to climate proofing their portfolios. It is not an assessment of the portfolios themselves as to whether or not they are climate proof, but rather it is an overview of what the EFIs are doing operationally to achieve a climate proof portfolio now and in the future.

## 1.5 Structure of the report

This report has four objectives. First, in Chapter 2 climate proofing is defined based on findings in the literature. Second, in Chapter 3, the European financial institutions are introduced. Here, the EFI's mandates and lending commitments are outlined. Third, Chapter 4 explores what climate proofing could entail operationally for the EFIs. Fourth, Chapter 5 analyzes the results of the interviews and literature review. The current status of the EFIs climate proofing is reviewed and a comparison with non-EU funding institutions is made. Chapter 6 is a discussion of the findings and recommendations and Chapter 7 draws conclusions.

## 2 What is climate proofing?

Academic journals use the term ‘climate proofing’ extensively. Do a search in Google Scholar and there are 29,000 references. Narrow the search to ‘climate proofing’ and ‘multilateral financial institutions’, and 13,200 references are found. However, though the term is used regularly, it is not usually defined. While climate proofing appears to have an accepted definition by its widespread use, for those less familiar with the concept, it is not always obvious what is actually meant. Thus, the first step in the study was to find a working definition of climate proofing against which the EFIs could be assessed.

Climate proofing most often appears in the literature on mainstreaming adaptation. Persson and Klein (2009) propose that climate proofing may be less ambitious than mainstreaming, but in avoiding a ‘semantics’ debate, they use the terms interchangeably. In the book *Mainstreaming Climate Change Development*, Gupta (2010, p.77) develops climate proofing as a stage within mainstreaming in which “... all policies, programmes and projects are subjected to climate proofing to ensure that they are resilient with respect to the impacts of climate change”. Given the suggestion of climate proofing as an operational or subordinate aspect to mainstreaming by these authors, it seemed necessary first to define mainstreaming in order to understand in what context climate proofing should be defined.

### 2.1 Definition of Mainstreaming

In the above mentioned book, Gupta also presents three definitions of mainstreaming, each with a different emphasis. As this study is focusing only on climate change adaptation, Mitchell *et al.*’s (2006 p. 10) definition is the more appropriate:

*In the context of climate change, mainstreaming implies that awareness of climate impacts and associated measures to address these impacts, are integrated into the existing and future policies and plans of developing countries, as well as multilateral institutions, donor agencies and NGOs.*

Klein *et al.* (2007 p. 25) have developed a similar definition:

*Mainstreaming involves the integration of policies and measures that address climate change into development planning and ongoing sectoral decision-making, so as to ensure the long-term sustainability of investments as well as to reduce the sensitivity of development activities to both today’s and tomorrow’s climate.*

As will be seen in the next chapter, EFIs are active not only in investing in vulnerable, developing countries but also in sectors in the EU that face risks from climate change. Therefore, for the purposes of this study, Klein *et al.*’s definition is the better fit. Applying this to the EFIs, mainstreaming of climate change would imply that the strategies and goals of the EFI have taken climate change into account and also that climate change concerns have been incorporated into all processes and activities of the institution.

### 2.2 Definition of climate proofing

Having defined mainstreaming, the next step was to see if there was an appropriate definition of climate proofing to be found in the literature? As stated above, in the

literature review few definitions for climate proofing were discovered, with only one found in an academic journal.

According to Klein *et al.* (2007), climate proofing is the modification of existing and future projects so that they are resilient to impacts from climate change and/or do not contribute to increased vulnerability of the projects goals.

Another definition, from the gray literature, states that climate proofing is: “Activities added to an ongoing development initiative to ensure its success under a changing climate” (McGray 2007, p.2).

Parry *et al.* (2007) define climate proofing as an understanding of current and future climate risks in order to develop new measures or adjustments to programs and projects so that these risks are minimized, in other words taking actions to protect investments against climate impacts.

And lastly, from a paper discussing how to improve the climate resilience of cohesion funds in Europe:

*Climate proofing is the identification of risks to a development project as a consequence of climate variability and change, and ensuring that those risks are reduced to acceptable levels through long lasting and environmentally sound, economically viable, and socially acceptable changes implemented at one or more of the following stages in the project cycle: planning, design, construction, operation, and decommissioning* (Baltzar *et al.*, 2009 p.7).

What these definitions have in common is that they are focused on the operational activities of mainstreaming rather than the policies and strategies (Olhoff & Schaer 2010) which validates the view from the previous section that climate proofing can be seen as one stage of mainstreaming – in the case of the EFIs that is the project stage.

For the purposes of this paper, a synthesized version of the above definitions of climate proofing will be used which is project focused in line with the EFIs’ foci:

Identifying risks to a project due to climate change impacts, both current and future, and ensuring that changes are implemented within the project cycle to reduce the risks to acceptable levels and thus making the project resilient to climate change.

Later, Chapter 4 explores how the EFIs could operationalize climate proofing based on this definition but first the EFIs are introduced.

### 3 EU Funding Institutions

*“Adequate finance is crucial to agreeing and implementing an international agreement limiting global warming to 2 °C. The EU has set one of the most ambitious emission reduction targets in the world. Financial institutions such as the EIB, together with the private sector, will play a key role in helping the EU deliver on its emission commitments as well as on mobilizing the financial flows needed for mitigation and adaptation to climate change in developing countries.”* - European Climate Action Commissioner Connie Hedegaard (EU 2010).

Significant financial resources are required to ensure that there is sufficient capacity to cope and adapt to climate change. The current and anticipated impacts of climate change are expected to cut across regions, sectors, and all types of socio-economic groups. This implies that hundreds of billions of dollars will be required in the near- and long-term for adaptation (Parry 2005)(Stern 2007). For example, the World Bank estimates that ‘climate proofing’ investments in developing countries alone would cost between \$9 and \$41 billion annually. This is not including costs to reduce exposure to current climate risks and unavoidable damage (World Bank 2006 as cited in Müller 2006 p. 1). Other institutions such as the Stern Report and UNDP have made similar estimates with ranges of \$4-37 billion (Stern 2007) and \$86-109 billion (UNDP 2007), respectively. Although there are many criticisms of the methodologies used to derive these estimates (Agrawala *et al.* 2008), there is agreement that the cost of climate change will be significant and will need to be met from various sources, both public and private (Bapna & McGray 2008)(Connell *et al.* 2009).

This section will introduce the European financial institutions (EFIs) that participated in the study, of which there are two types: multilateral financial institutions (MFIs) and bilateral financial institutions (BFIs). Although there are other types of public funding institutions, such as bilateral development agencies, export credit agencies as well as private sector sources, these are outside the scope of this report.

#### 3.1 Multilateral financial institutions

MFIs are institutions which have a financial/banking basis and to which multiple countries contribute funds and share ownership (Atteridge *et al.* 2009). They are usually established by regional groupings of countries to finance projects or activities of mutual interest. In Europe they include the European Investment Bank (EIB), one of the largest financial institutions in the world (EIB 2009a), and a number of smaller regional MFIs such as the European Bank for Reconstruction and Development (EBRD). In total, six MFIs participated in this research. They include, along with the EIB and the EBRD, the Black Sea Trade and Development Bank (BSTDB), the Council of Europe Bank (CEB), the Nordic Environment Finance Corporation (NEFCO), and the Nordic Investment Bank (NIB). The following is a brief description of each of these MFIs.

##### 3.1.1 European Investment Bank (EIB)

The EIB was created in 1958 under the Treaty of Rome, which established the European Community. As the bank of the EU, the EIB uses its expertise and resources to invest in the future of Europe and its partners. Its shareholders are the 27 EU Member States

and the Finance Ministers of these States compose the EIB Board of Governors. The EIB raises the majority of its funds on the capital markets, which, according to its mission, it lends to projects that further EU policy objectives, both in the public and private sectors and in EU Member States as well as EU Partner Countries. It is continuously adapting its activities to new developments in EU policies (EIB 2010a). The EIB is financially independent and is not included in the EU budget (EIB 2009a).

As noted above, the EIB is one of the largest multilateral banks in the world; approving loans in 2008 totaling more than €59 billion, double that of the World Bank for the same period (Douma *et al.* 2010)(EIB 2009b). The EIB's primary activities are targeted towards the integration, balanced development and economic and social cohesion of the EU Member States (EIB 2010a). Although the majority of EIB's lending goes to projects within EU countries, its lending priorities also include financing investments in future Member States of the EU and EU Partner countries (Douma *et al.* 2010)(EIB 2010a). This includes contributing to the implementation of EU development aid and cooperation policies (EIB 2009a). See Figure 3.1 for a breakdown of EIB commitments by region and by sector for 2009 (EIB 2010b).

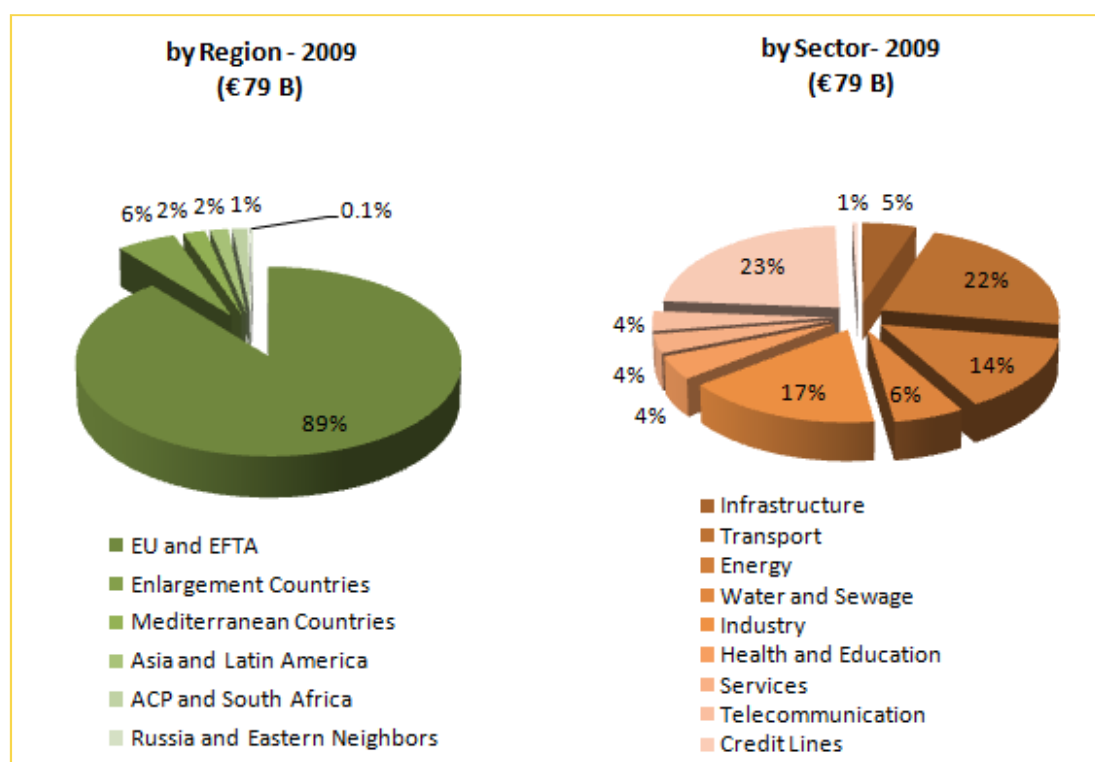


Figure 3.1 Breakdown of commitments by region and sector for 2009

Within the EU, the EIB has six operational goals with respect to its lending. These include, among others, reinforcing the EU's cohesion and convergence, developing trans-European transport and energy networks, and protecting and improving the environment (EIB 2010a). Outside the EU, EIB's lending is outlined in regional mandates based on the EU's development and cooperation policies (EIB 2009b). Though projects external to the EU are based on the regional policies, they often overlap with operational goals of the EU, particularly promoting environmental sustainability. For example, EIB lends to projects which provide water services in the EU's Partner Countries where water is a basic need and a key element in food production (EIB 2010a). These projects fall under the environmental goal but also



support the EU's external policies. Additionally, the bank wants to promote actions in mitigation and adaptation both in and outside the EU as developed in its sectoral policies (EIB 2009a).

### 3.1.2 European Bank for Reconstruction and Development (EBRD)

The EBRD was the first MFI of the post Cold War period. It was established in 1990 as a response by Europe to the changes and challenges in Central and Eastern Europe after the fall of the Berlin Wall. The original role conceived for the EBRD was to foster transition from systems based on centrally planned economies to free democratic institutions and market economies in countries committed to the principles of multi-party democracy. Originally owned by 40 countries, the EU and the EIB, ownership of the EBRD has expanded to 61 countries (see Annex 4 for a list of owner countries and institutions). Each owner is represented on the Board of Governors (EBRD 2010a).

The EBRD is the largest single investor in the region, investing €7.9 billion in 2009, and is also the lead in mobilizing significant foreign direct investment into the area (EBRD 2010b). The EBRD operates in 29 countries and invests mainly in private enterprises, usually together with commercial partners (See Annex 4 for a list of the regions and countries in which the EBRD operates). It also works with publicly-owned companies to support privatization, restructuring of state-owned firms and improvement of municipal services. See Figure 3.2 for a breakdown of lending by region and sector for 2009 (EBRD 2010b).

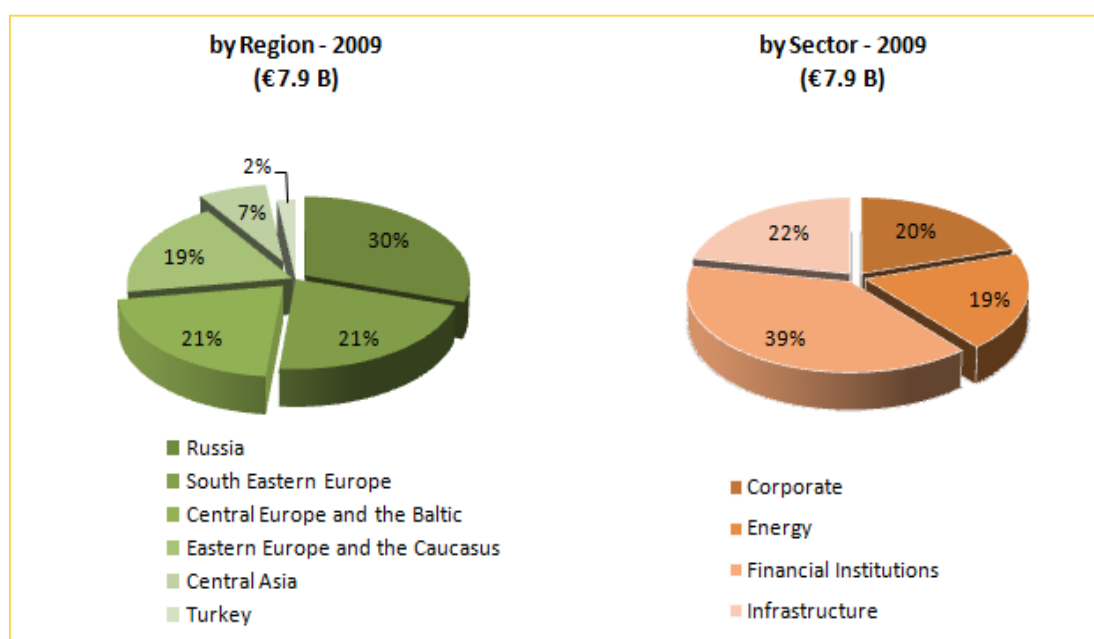


Figure 3.2 Breakdown of EBRD commitments by region and sector for 2009

In its capacity as a development bank, the EBRD seeks to finance operations that are both commercially viable and assist development, including in the environmental field. Protection of the environment is a core component of the EBRD's mandate. It has a stated goal to promote environmentally sustainable development in all its activities, as the EBRD believes that sustainable development is fundamental to sound business practice (EBRD 2010a).



### 3.1.3 Black Sea Trade and Development Bank (BSTDB)

BSTDB is an MFI established by Albania, Armenia, Azerbaijan, Bulgaria, Georgia, Greece, Moldova, Romania, Russia, Turkey, and Ukraine in 1992 and started operations in 1999. With an authorized capital of SDR 3 billion (approximately €3.5 billion), the BSTDB promotes economic development and regional cooperation in its member states. The mission of the BSTDB is to effectively contribute to the transition process of the Member States towards the economic prosperity of the people of the region. This translates into a dual mandate for BSTDB to promote (i) regional cooperation among its Member States and (ii) economic development in Member States principally by financing operations in the private and public sectors (BSTDB 2010a). It provides trade and project financing, guarantees, and equity for development projects supporting both public and private enterprise in order to build stronger economic linkages. See Figure 3.3 for a breakdown by region and sector of BSTDB lending for 2009 (BSTDB 2010b).

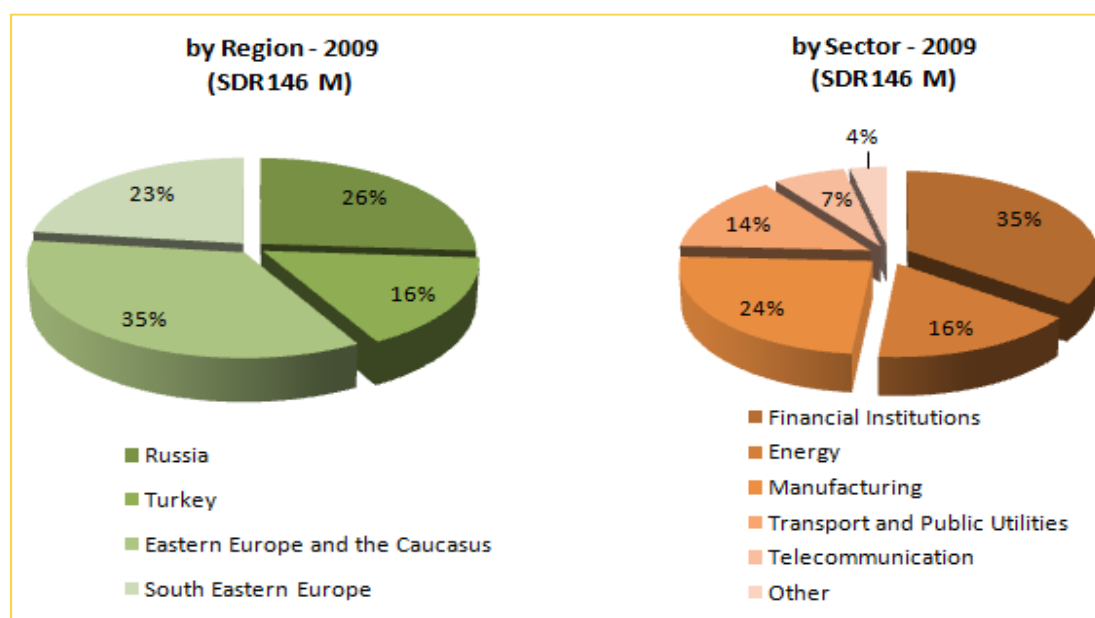


Figure 3.3 Breakdown of BSTDB commitments by region and sector for 2009

Additionally, the BSTDB is committed to promoting environmentally sound and sustainable development in all its financing activities, therefore all its operations are required to be, at a minimum, environmentally neutral, that is they do not add to the existing pollution (BSTDB 2010a).

### 3.1.4 Council of Europe Development Bank (CEB)

The CEB is a multilateral development bank with a social mission. The EFI was established in 1956 by eight Council of Europe countries, making it the oldest MFI in Europe. In recent years, its membership has increased to include the countries of Central and Eastern Europe. The CEB operates within the framework of the Council of Europe and supports its priorities. However, it remains a separate legal entity and is financially independent (CEB 2010a).

The EFI's original mandate was to respond to emergency situations. Its priorities have been aid for refugees and migrants as well as projects in natural or ecological

disasters. Over time, the CEB's mandate has widened to include other sectors which also contribute to the social cohesion in Europe. The CEB promotes sustainable and equitable growth in its 40 member states (see Annex 5 for a list of CEB's Member States) via investment in socially oriented projects in three sectors: social integration, the environment and public infrastructure (CEB 2010a). In fulfilling its mandate, the CEB invested approximately €1.8 billion across nearly all of its member states in 2009 (CEB 2010b). See Figure 3.4 for a breakdown by region and sector of CEB lending in 2009 (CEB 2010b).

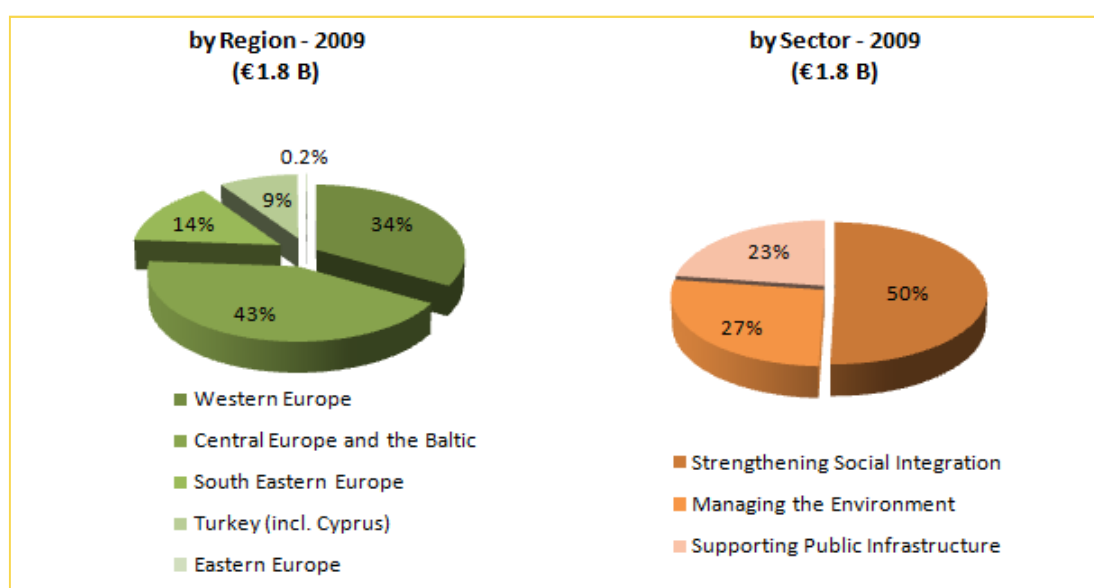


Figure 3.4 Breakdown of CEB commitments by region and sector for 2009

### 3.1.5 Nordic Environment Finance Corporation (NEFCO)

NEFCO is an MFI established in 1990 by the five Nordic countries: Denmark, Finland, Iceland, Norway and Sweden. NEFCO finances cost effective environmental projects primarily in Russia, Ukraine, Estonia, Latvia, Lithuania and Belarus. The EFI is engaged in a wide variety of project types all with significant local and regional positive environmental impacts such as water and sewage, energy and environmental services (NEFCO 2010).

NEFCO's mandate is to invest in operations that reduce pollution originating in Eastern Europe. This translates into support for projects that, for example, reduce discharges into the catchment areas of the Baltic Sea. Projects having a major impact on the Nordic region are given priority, therefore primary efforts focus on protecting water and air quality (NEFCO 2010). A breakdown of NEFCO commitments for 2009 by region and country is not available.

### 3.1.6 Nordic Investment Bank (NIB)

NIB is owned by Denmark, Estonia, Finland, Iceland, Latvia, Lithuania, Norway and Sweden. It finances projects that strengthen competitiveness and enhance the environment. The EFI lends not only in its member countries and but also in emerging markets such as: Africa and the Middle East; Asia; Europe and Eurasia; and Latin America (NIB 2010a).

NIB's strategy is to promote competitiveness and support the environment. Although the EFI is flexible in lending to different sectors and areas of the economy, particular consideration is given to projects in infrastructure, environmental improvement, the corporate sector and SMEs (NIB). See Figure 3.5 for a breakdown of lending by region and sector for 2009 (NIB 2010 b).

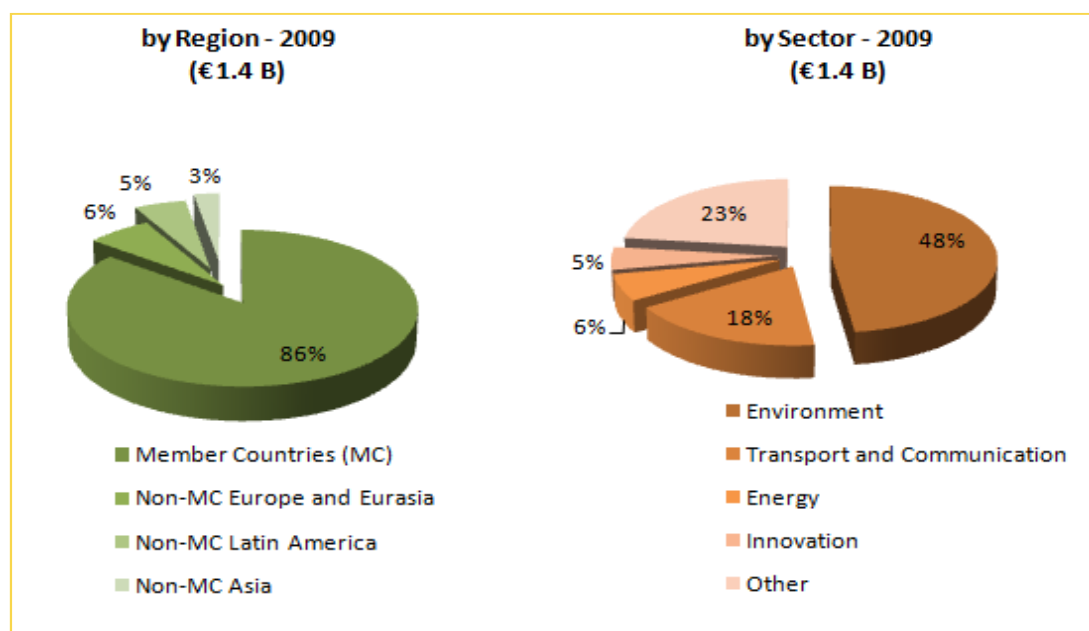


Figure 3.5 Breakdown of NIB commitments by region and sector for 2009

## 3.2 Bilateral Financial Institutions (BFIs)

Bilateral financial institutions are created and directed by individual countries in order to finance development projects and programs in developing countries or emerging markets (Atteridge *et al.* 2009). Three BFIs participated in the study and are introduced below.

### 3.2.1 Agence Française de Development (AFD)

**AFD** is a bilateral financial institution established in 1941 by the French government. Its mission is to finance development projects according to the development aid policies of France (AFD 2010a).

**AFD's investment activities are aimed at poverty reduction and** promotion of sustainable economic growth while protecting 'global public goods'. This includes among other things, the fight against climate change, the preservation of biodiversity, and the promotion of social and environmental responsibility (AFD 2010a).

**AFD uses a wide range of financial instruments and know-how to invest in economic and environmental projects** in sectors such as rural development, urban infrastructure, transportation, agriculture, mining, banking, energy, health care, telecommunications, , housing, eco-tourism and education (AFD 2010a). See Figure 3.6 for a break out of lending by sector and region for 2009 (AFD 2010a).

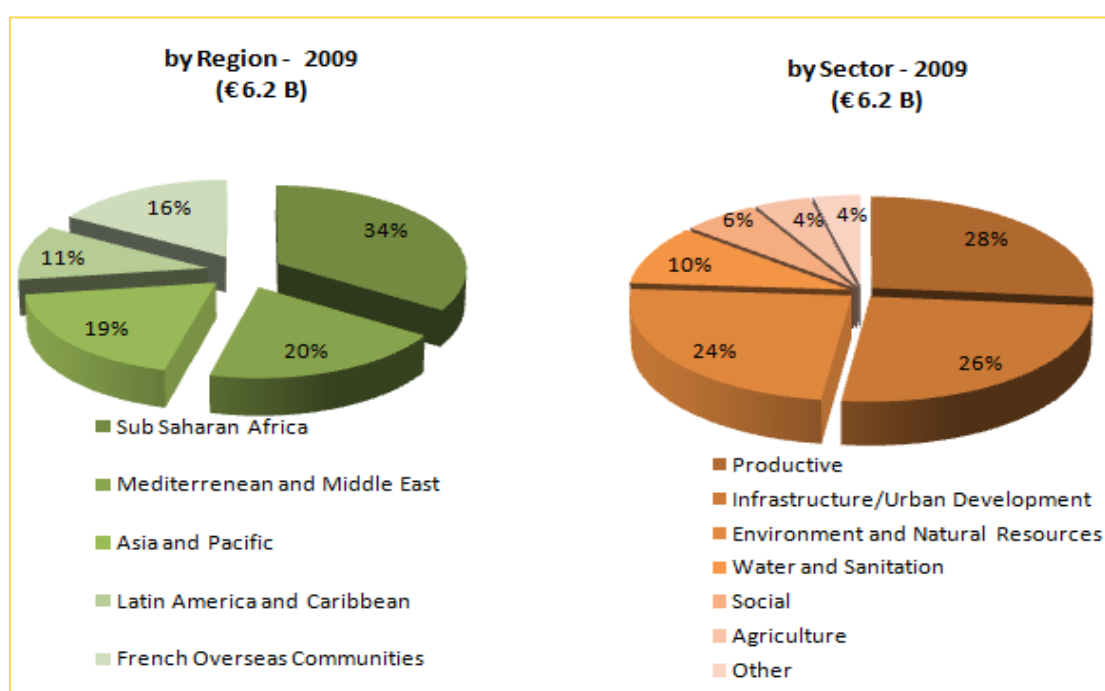


Figure 3.6 Breakdown of AFD commitments by region and sector for 2009

### 3.2.2 KfW Entwicklungsbank (KfW)

KfW carries out financial cooperation on behalf of the German Government. The EFI invests in projects that contribute to reducing poverty, promote equity of globalization, conserve natural resources and help ensure peace. KfW's financing activities are in line with the development principles of the German government (KfW 2010).

KfW operates in Central and Eastern Europe, Asia, Latin America and Africa. Its development projects in these regions focus on, among other sectors, energy, water, waste management, natural resources, tropical rainforest and climate change. KfW lent over €3.7 billion in 2008 in support of these types of projects (KFWB 2009). See Figure 3.7 for a break out by region and sector of KfW's lending in 2008 (KFWB 2009).

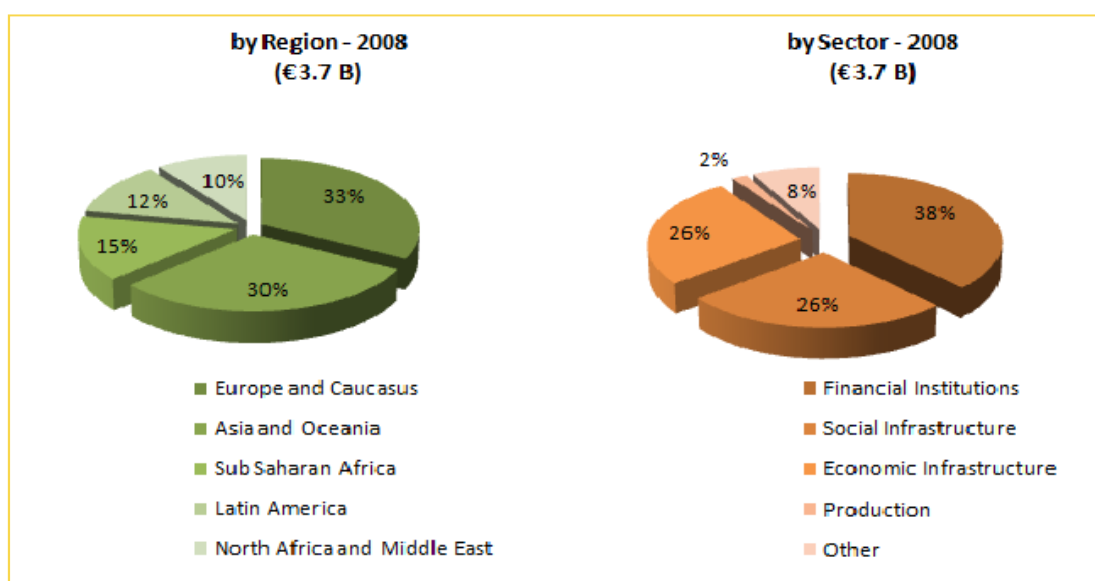


Figure 3.7 Breakdown of KfW commitments by region and sector for 2008

### 3.2.3 FMO (FMO)

FMO was founded by the Dutch government and business community in 1970. The Dutch State owns the majority with 51% of FMO's shares. Dutch banks hold 42% with the remaining 7% distributed between smaller investors (FMO).

FMO is the entrepreneurial development bank of the Netherlands. Since its inception, its mission has been to promote entrepreneurship in emerging markets in order to further development. FMO's investment activities contribute to the development of the private sector in Africa, Asia, Eastern Europe and Latin America in sectors such as energy, housing and finance (FMO 2010a). In 2009, FMO made commitments of over €900 million in support of these regions and sectors (FMO 2010b). See Figure 3.8 for a break out of lending by region and sector in 2009 (FMO 2010b).

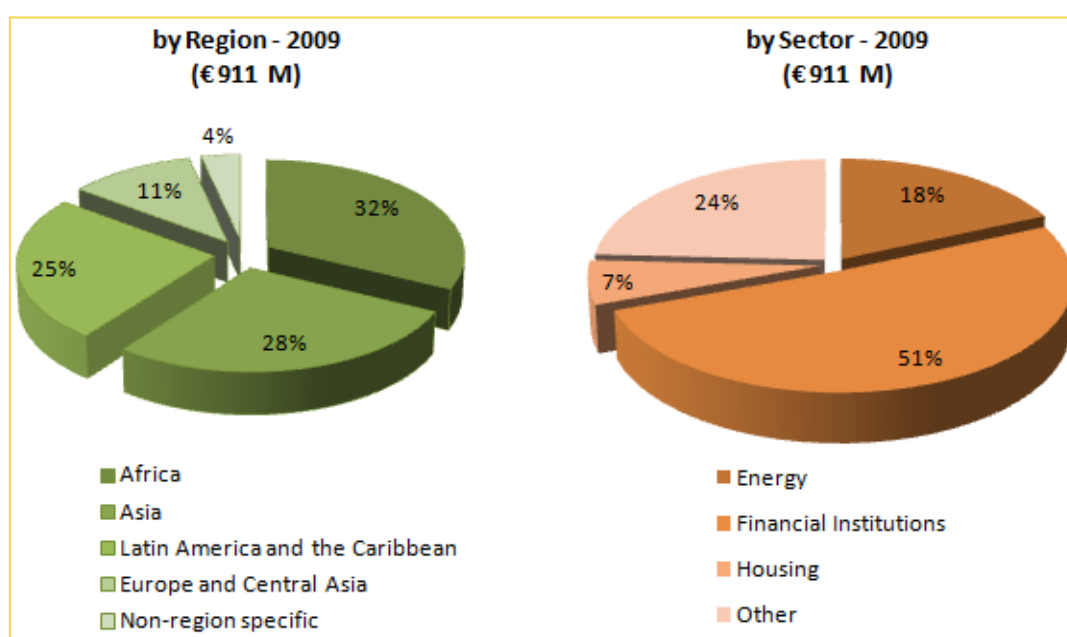


Figure 3.8 Breakdown of FMO commitments by region and sector for 2009

An analysis of the EFIs participating in the study highlights three common points. First, each of the EFIs is owned partially or wholly, by EU Member States. This means that their mandates are in support of these Member States' policies and strategies. And although the EIB and CEB have missions to support the policies of the EU and the Council of Europe, respectively, they are not directly owned by these institutions. Only the EBRD has direct ownership by the EU and it is equal to the ownership of the other 62 owners.

A second point is that all the EFIs are making significant lending commitments in those sectors and countries which have been identified as vulnerable to climate change impacts. For example in 2009, the EFIs (not including NEFCO and KfW), committed nearly \$7B to infrastructure projects, a key focus sector of the EU White Paper framework (EU 2009).

Lastly, all the EFIs have a similar commitment to the environment. Each EFI has the environment and sustainability as key pillars of their financing activities. For example, one of EIB's six operational goals is to protect and improve the environment and the BSTDB requires that its operations are environmentally neutral.

The EFIs have overlapping ownership structures, lend in many of the same sectors and regions and have a similar commitment to the environment. But, do they have a similar approach to climate proofing their investments? That question will be addressed in Chapter 5, but first, the following chapter will try to answer the sub-question introduced in Chapter 1 – "How can climate proofing be achieved?"



## 4 How can the EFIs climate proof their investments?

If mainstreaming adaptation is a priority of an EFI, then based on the definitions from Chapter 2, climate proofing its assets is a key element of an EFI's climate change strategy. From the perspective of the EFIs, one way the risks from climate change can be evaluated is on the extent to which these risks will affect the value of a current project or a project under consideration. If all the known impacts from climate change and their consequences are incorporated into the EFI's appraisal and valuation does the result show a change in value to the project? If so, are there changes that can be made within the project cycle to reduce the risks to acceptable levels making the project more resilient to climate change impacts (OECD 2009)? In other words can it be "climate proofed"?

Two steps can be envisioned to carry out this strategy: first, a screening of an EFI's existing portfolio for risks from climate change, and second, incorporation of climate proofing of new investments via the EFI's project cycle. Each of these will be discussed in the following sections.

### 4.1 Portfolio screening

As the need to mainstream climate change adaptation into planning and decision making processes has become more accepted and even urgent (Parry *et al.* 2005), an ever increasing number of adaptation methods, guidelines and tools are being developed. Generally, these have been developed independently by various types of organizations and agencies, for different reasons and objectives and targeted at varying levels such as national, sectoral and project (Olhoff & Schaer 2010).

The approaches to mainstreaming vary from very broad guidelines such as developing a framework for incorporating adaptation at various levels, to more narrow tools which support different stages of mainstreaming such as climate proofing projects. It is these tools that are the most relevant to the EFIs as the majority of their lending, as outlined in the previous chapter is for projects, not capacity building or country program lending, for example.

Climate change is pertinent in three main ways to EFIs:

Impacts resulting from climate change could put the long term viability of project and its goals at risk.

The vulnerability to climate change of a community or system that a project is intended to benefit could indirectly impact the success of the project.

The possible unintended effects of the project and its deliverables on the vulnerability of communities or other systems to climate change could also hinder the project in meeting its targets (Klein *et al.* 2007).

Therefore, a useful tool for the EFIs is a portfolio screening tool that can be used to assess an EFI's current investment portfolio against these climate change impacts and give guidance on how and where to respond to these implications (Gigli & Agrawala, 2007)(Klein *et al.* 2007). The screening will enable an EFI to identify those projects that are vulnerable to climate change risk and to modify the projects to either adapt to risks or take advantage of opportunities arising from climate change (OECD 2009). Importantly, portfolio screenings also can help identify how climate change risk



management can be incorporated in future projects (Olhoff & Schaer 2010) in order to prevent avoidable impacts in the future (Füssel & Klein 2006).

Portfolio screenings which have been done by multilateral institutions in the past have had varying goals. The International Finance Corporation (IFC) did three pilot studies to develop a “first order understanding” of how to assess climate change risk in its existing portfolio (Connell *et al.* 2009, p.141). The World Bank examined the implications of climate change on its operations, looking particularly at the vulnerability of the projects, and the impact of the projects on the vulnerability of the targeted system (Klein *et al.* 2007) (Burton & van Aalst 1999). Other screenings have been done by development agencies in order to, for example, assess how to manage climate risks and opportunities within its portfolio, or identify relevant sectors and priority measures for adaptation. Although the goals of the portfolio screenings were similar- addressing one or more of the ways climate change is relevant to an EFI as outlined above - in each case a different tool was used as there are a number of screening tools available that address different levels and geographical regions.

Recently, Olhoff & Schaer (2010) took stock of the screening tools and guidance that are currently available. They provided a summary of the scope and goals of these tools and guidance including among other things the target level and the target audience. Of the thirty tools they identified, three are knowledge and information platforms targeted at various levels and at different audiences. The remaining twenty-seven tools and guidance were aimed at more specific levels and audience with some overlap. For example fourteen tools are targeted at the programme level, while thirteen are targeted at the project level, with six targeted at both. The target audiences for these tools are usually project or program managers. Only one tool is targeted at the strategic level and one at the organizational level. The remaining are aimed at the country or sector levels (Olhoff & Schaer 2010).

The fact that a majority of the tools are focused on the project or programme level may be that these levels are seen as a direct entry point for climate change risk screening (Olhoff & Schaer 2010). The EFIs operations are project focused and it is at this level that they have the most influence, as will be seen in the following section. Therefore, the thirteen tools aimed at the project level appear to be the most relevant to the EFIs. See Table 4.1 for a summary of these thirteen tools and guidance for projects.

The summary also reviewed the approach used, and whether or not a costing exercise was included. Five of the tools are computer based. These are generally more easily applied in practice. The user provides inputs throughout the process of assessing the risks and defining responses (Olhoff & Schaer 2010). See Box 4.1 for a description of ADAPT, one of these computer based tools.

Olhoff & Schaer (2010) also considered whether a costing exercise was included with the tools or guidance. These exercises are important because economic arguments are often useful in getting the attention of decision makers and helping in the allocation of resources (Olhoff & Schaer 2010). This aspect could be important for the EFIs in making their investment decisions. However, of the thirty tools, only six included costing exercises, implying that more work needs to be done in this area (Olhoff & Schaer 2010).

Table 4.1 Summary of tools and guidance for projects

Title of tool or guidance	Organisation or Institution	Target audience	Approach	Summary	Level	Costing exercise included
Adapt Assessment and design for adaptation to climate change (see Box 4.1 for more detail)	World Bank	Development project planners & managers, policy makers	Software based Approach integrating climate Databases and expert assessments	Carries out risk analysis at the planning and design stage , through a five level flag classification and proposes options to minimize risks + guides project designers to appropriate resources. The focus so far is on agriculture, irrigation and bio-diversity.	Project	No
Climate-FIRST Climate Framework Integrating Risk screening tool	Asian Development Bank (ADB)	Development project planners/managers	Risk assessment	Climate risks screening software tool for rapid assessment of projects/programmes risk potential	Project & Programme	NA
CRISTAL Community based risk screening tool - adaptation and livelihoods	SDC, IISD, World Conservation Unit (IUCN), Stockholm Environment Institute (SEI) and inter-cooperation	Development project planners and managers	Participatory and vulnerability based approach, step-by-step, computer based method	User-friendly conceptual framework, aimed at raising awareness on climate change adaptation and facilitating the identification and organization of an adaptation strategy.	Project	No
ORCHID Opportunities and Risks from Climate Change and Disasters	Institute of Development Studies (IDS) and Department for International Development (DFID)	Development project planners/managers	Portfolio risk assessment method based on pilot studies	Basic framework including a 4-step generic approach to portfolio screening for climate risks.	Project	Yes
APF Adaptation policy framework for climate change	UNDP	UN agencies, Development agencies/practitioners, and policy-makers	Step-by-step structured generic guidance	Guidance to risks and vulnerability assessment, and to support the formulation and implementation of climate change adaptation policies and measures	Project & country programme	No

Title of tool or guidance	Organisation or Institution	Target audience	Approach	Summary	Level	Costing exercise included
Climate Change Adaption Guidance Manual	USAID	Development project planners and managers	User-friendly, participatory life cycle approach based on pilot studies	6 steps project life-cycle approach integrating adaptation considerations, through an adaptation assessment matrix	Project	Yes
OECD Guidance on integrating climate change adaptation into development projects (draft)	OECD	Development agencies/practitioner, policy-makers	Comprehensive, all level-based, generic guidance based on national policies and processes	Provides general guidance on climate change adaptation considerations inherent to various levels (project, portfolio, local, sectoral, national)	Project, Programme, local, sectoral, and national levels	No
Quality standards for integrating climate change adaptation (UNDP CCA Quality Standards) (draft)	UNDP	UN agencies, development agencies/practitioners, policy-makers	Generic approach based on climate change adaptation quality standards.	Minimum requirements for different phases of the integration of climate change adaptation into development programs and projects	Project & country programme	No
Red Cross/ Red Crescent climate guide	Red Cross/ Red Crescent	NGO project planners / managers	Hands-on, bottoms up and participatory approach combining Disaster Risk Reduction methods with Adaptation	Thematic modules on how to integrate adaptation in development projects coupled with real-life scenarios, focused on a few aspects climate adaptation (communication, health etc.)	Project	No
Sourcebook: Integrating Adaptation to climate change into UNEP Programming	UNEP	Programme/project	Generic guidance on how to integrate Programming	Generic introduction to climate adaptation in general and to how to integrate climate change adaptation in programming. Not a tool as such but a guidance to initial steps and relevant resources.	Programme & project	No

Title of tool or guidance	Organisation or Institution	Target audience	Approach	Summary	Level	Costing exercise included
OECD		Programme & project	Country case studies	Identification of synergies and tradeoffs in the mainstreaming of climate change into development assistance: address key priorities for adaptation, analysis of donor portfolio in terms of climate risks, and study of key resources potentially affected by climate change.	National, programme, project.	No
Swiss Development Cooperation (SDC)		Development project planners/managers	Multi level screening approach	Assessment of potential effects on project and programmes by vulnerability to climate variability and change. Focus on national preparedness, impacts and vulnerability at the local level, and on the main barriers to implementation of adaptation and mitigation measures.	National, local and project	No
World Bank		Development project planners / managers	Country case studies	Assessment of WB project vulnerability to climate change, impacts of projects on vulnerability and implications of institutional roles within the UNFCCC and GEF for the World Bank activities	National, programme and project	No

Taken from Olhoff & Schaer 2010 p. 25-28S/bs

Deciding which tool is appropriate to use to assess climate risk is a function of the type of project, the region in which it is located, activities it supports and the target decision makers (Füssel & Klein 2006). Additionally, there may be other tools which could be relevant to a portfolio screening such as down-scaling tools for climate models that might be an input to one of the project tools. And although there is an ever growing number of tools, many are in the pilot stage, and not yet widely tested or implemented and often have limited applicability (Ludwig & Swart 2010)(OECD 2009). A further constraint is that as climate risk assessments are still new, there is not yet a common approach and agreed upon methodology (OECD 2009). In other words, portfolio screening is not straightforward (Klein *et al.* 2007). Box 4-1 gives a description of ADAPT, just one of many tools available. ADAPT is one of the thirteen project oriented tools identified by Olhoff & Schaer (2010) and highlighted in Table 4.1. It was developed by the World Bank, a non-European financial institution, thus, it may be a relevant tool for the EFIs.

An additional constraint that an EFI faces with respect to screening its portfolio is that although it may be able to identify those sectors and regions which are the most vulnerable to climate change impacts, assess what possible adaptation actions could and should be taken, and decide how these actions could be implemented, the EFI is still not the ultimate decision maker of the project. The EFI does not make the operational decisions regarding a project. That is the responsibility of the project promoter. This has implications for achieving any adaptations that might be deemed necessary by the EFI. An EFI has influence as a major stakeholder in the project, but the EFI's ability to effect change at this point in the project is more constrained than when assessing a new project plan. This can be seen in the discussion of the project cycle in the following section.

Even operating within these constraints, an EFI can benefit from screening its current portfolio as a first step in climate proofing its investments. Identifying regions and sectors that are particularly vulnerable to climate change risk or that may lead to the vulnerability of other systems, may allow the EFI to make appropriate changes to current and future projects ultimately protecting its investments. The EFI can take these types of key learnings and incorporate them into its own project cycle. Within that framework, the EFI has more points of entry where it can ensure that its investments are, or become, more climate resilient.

#### Box 4.1 Description of ADAPT tool

##### *Assessment and design for adaptation to climate change (ADAPT)*

Adapt is a computer based tool to be used at the project design phase to screen for climate change risks. It has a dual function – screening and designing – intended for adapting projects to climate change.

The tool's aim is to provide a first, quick check of potential climate related issues by sector and by region. It utilizes location and activity information that are screened through a sensitivity matrix based on data from a general circulation model (GCM).

Using a system of flags, the climate risks associated with the project are categorized:

- Red flag: Significant climate risk
- Yellow flag: Some climate risk
- Orange flag: Not enough known to assess
- Green flag: No adaptation issues perceived
- Blue flag: Activity may reduce climate risk

The design process is carried out by providing a guide of options to minimize risk where necessary.

Target users are practitioners involved in project planning and design.

ADAPT can be found in the World Bank Climate Change Data Portal.

Source: World Bank 2010, OECD 2009

## 4.2 Project Cycle

All of the EFIs participating in this study manage their investments through a basic project cycle. The cycle is a sequence of steps formulated to ensure that all the relevant issues and risks are taken into account during the life of a project. Although the steps may be labeled differently at each of the EFIs, the steps within the cycles are essentially the same (see the EFI websites for individual project cycles). First a description of the basic steps of the cycle will be given followed by a discussion of how climate proofing can be integrated into the framework of an EFI's project cycle.

### 4.2.1 Basic steps of a project

Via the project cycle an EFI is able to assess the viability of a project at each step in its development and to build on the previous step in the sequence. See **Error! Reference source not found.** for an illustration of a basic project cycle, adapted from OECD (2009). The relevant risks and issues are reviewed and taken into account during each phase of the cycle starting with project identification.

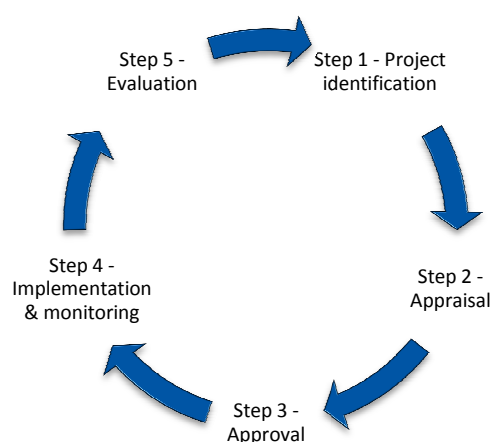


Figure 4.1 Steps in the project cycle.

### Project identification

The first step in the cycle is project identification. At this point projects are submitted to the EFI via potential promoters, other financial institutions, or public authorities (project promoter). In some cases, an EFI will be proactive in searching out projects that meet policy goals of its Member State(s). Preliminary strategies, general project outline and project goals comprise some of the information supplied to the EFI by the project promoter. The EFI, using its relevant in-house knowledge, can make an initial examination and can provide a preliminary response regarding the eligibility of a project. Additionally, the EFI may suggest further improvements to various specifications or inform the project promoter of restrictions or regulations that may apply. At this step, the EFI can influence many aspects of the project plan because it is usually in the preliminary stages.

### Appraisal

If a project is deemed eligible in the first step, it moves into the second step of the cycle - project appraisal. Here each project is analyzed in detail and evaluated against multiple criteria by a multi-disciplinary team of experts. The project promoter will have supplied documentation on various aspects of the project such as: financial and economic data, technical and environmental data and other relevant information. Further, due diligence is done on all the relevant risks the project may face, such as financial, operational and credit risks. It is at this point that the project team determines whether or not to move forward with the project and request approval from the appropriate parties, i.e. the Management Board or Board of Directors.

### Approval

The results of the appraisal are presented for formal approval from the appropriate bodies. If approval is obtained, contracts are drawn up and negotiated. These contracts incorporate any technical, economic or environmental conditions which may be required for funding and further disbursements. When all the stakeholders are in agreement the contracts are signed and the project can begin implementation.

### Implementation and monitoring

In this step disbursements are made and the project is developed using the agreed resources to carry out the planned activities in order to achieve the agreed objectives. The project is monitored during the implementation as well as the operational phase. Progress is assessed from the technical, economic and environmental points of view to determine if the expectations and conditions of the contracts are being met and to enable adjustment to changing circumstances if necessary. If contract conditions are not being met, disbursements could be withheld. When the project is completed and the loans are repaid, an evaluation usually takes place.

### Evaluation

The evaluation step has as its objective to assess the achievements of the project, the project goals and strategies, and the efficiency and effectiveness of the project process. Conclusions from the evaluation can be considered in recommendations that serve to improve current operations and can be taken into account when planning and implementing future projects. Usually this step is undertaken by independent staff or external consultants to ensure objectivity.

#### 4.2.2 Integrating climate proofing into the project cycle

As mentioned above, the project cycle is a way for the EFI to assess the viability of a project by ensuring that all the relevant risks are taken into account during the life of the project. Historically, viability has been defined in economic and financial terms but as environmental and health and safety risks became more important, the term has expanded to include these issues as well (OECD 2009). Increased attention has been given to climate proofing by regulators and other authorities (e.g., the EU White Paper), making risk assessment of climate change a relevant issue for the EFIs. It is another risk that can be considered in the project cycle when assessing a project's viability.

Key entry points for assessing climate risk are in the planning steps - project identification and appraisal (Benson & Twigg 2007). However, climate change risk can also be factored in during the other steps of the cycle. This may lead to changes to an ongoing project to adapt to a potential risk or to take advantage of opportunities that are identified (OECD 2009). The following sections discuss such integration of climate proofing into the steps of a project cycle. See Figure 4.2 for an illustration of the process and key entry points.

### Project identification

The first step in the cycle gives the EFI the opportunity to examine a potential project for eligibility based on its in-house criteria. With respect to climate change risk, the EFI can apply a "climate lens" to assess whether or not the project is vulnerable or may put other systems at risk from climate change concerns (Olhoff & Schaer 2010). For example, the EFI may use a screening tool that determines if the project meets certain criteria with regard to risk, which then helps the EFI determine if a more in-depth risk

assessment is necessary. It is at this point that the EFI can first exert influence regarding the importance of climate change risk assessment.

If the initial review reveals potential risks from climate change and the project promoter has not considered these risks in his project outline or strategies, the EFI has the opportunity to provide training to the project promoter regarding the risks and to require an in-depth assessment. The EFI can influence the choice of screening tool used by the project promoter. This tool may be one of those reviewed by Olhoff & Schaer (2010) or there may be other tools more relevant for the region or project. The pre-screening at this stage ensures that the EFI can avoid projects deemed too risky, request a more in-depth risk assessment for the appraisal stage, and prioritizes those projects which contribute to adaptation efforts (OECD 2009).

### Project appraisal

It is at this stage where the EFI has the most influence on climate proofing its investments. It is during project appraisal when risks are reviewed in detail. Based on results of the in-depth assessment of climate change risk provided by the project promoter, the EFI can require changes in the design or strategy of the project in order to reduce its vulnerability to climate change or make to exploit any opportunities for adaptation that may have been identified (OECD 2009). Additionally, the EFI may determine that the project is not viable within their criteria, and determine not to proceed to the approval phase.

### Approval

In the approval phase, future targets and conditions which must be met by the project are negotiated and included in the financing contracts. It is here where the EFI can ensure that it has some control on the project going forward. Compliance with these conditions and targets is reviewed in the implementation and monitoring stages.

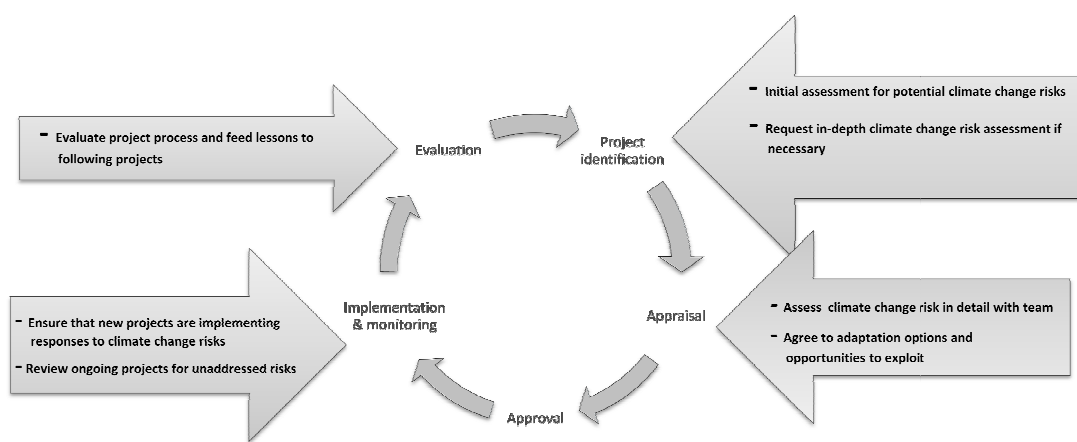
### Implementation and monitoring

In the approval phase, conditions and targets are set which must be met during the life the project. If during the monitoring it is determined that these are not being met, disbursement of funds may be withheld. It is also during this phase that new conditions may be negotiated. This may be necessary, if for example, expected climate impacts occur earlier than expected or new opportunities are identified (OECD 2009).

### Evaluation

Evaluation is an opportunity to look ex post at the process for each project and determine the successes and opportunities for improvement. The EFI should assess whether the responses take to climate change risk achieved the intended goals and whether there were any adverse impacts (OECD 2009). As stated in Section 4.2.1.5, conclusions from the evaluation can be taken into account in ongoing and future projects. Because experience with integration of climate change risk assessments is limited, evaluations provide an opportunity for the EFI to build knowledge based on past experience and learnings.





Adapted from OECD 2009

Figure 4.2 Illustration of the project cycle and key entry points for climate proofing

## 5 What are the current climate proofing policies of the EFIs?

The objective of this research is to answer the question: To what extent are the European financial institutions climate proofing their investments? In the previous chapters the sub-questions regarding the definition of climate proofing, who the EFIs are and how they might operationalize climate proofing were discussed. In this chapter, the sub-questions “*what are the current policies of the EFIs*” and “*are the EFIs leaders in climate proofing*” are explored.

In order to answer these sub-questions, a review of the literature and the websites of the EFIs was undertaken (see Section 1.4 for the methodology). As mentioned earlier, there is very little in the literature regarding EFIs and their overall efforts to climate proof. There is much written about mitigation and the EFIs’ efforts in that regard but that is not within the scope of this research. The same issue was found with review of the EFIs’ websites. Although there is extensive documentation on the EFIs’ mitigation efforts and their environmental policies, in most cases very little detail with respect to climate change policy is given. Therefore, to fill this data gap, interviews were conducted with experts at nine EFIs and six other organizations to provide more specific relevant information. See Annex 1 for a list of the experts and their organizations.

The purpose of the interviews was threefold. First, as discussed in Chapter 2, the definition of mainstreaming and climate proofing may not always be the same depending on one’s perspective, therefore it was important to understand if the EFIs’ definitions were in line with the research. Second, the interviews were used to fill in the above mentioned data gaps via a series of six questions focused on policies and actions. Answers to these questions were used to assess the status of the EFI’s climate proofing activities based on the definition derived in Chapter 2. These questions also were used to answer the sub-question regarding leadership. Third, in order to understand possible shortcomings with respect to the EFIs’ climate proofing actions, the EFIs were asked about obstacles they faced in that regard. The following is an analysis of the results from the interviews.

### 5.1 What are the current climate proofing policies of the EFIs?

The questions for the interviews were formulated from the hypothesis that the EFIs would be actively engaged in climate proofing activities and the results would be a review and comparison of the various approaches of the EFIs. However, as adaptation is relatively new on the EU and EFI’s agendas, this was not always the case. In these instances the questions were reworded as appropriate as will be seen in the following sections. Table 5-1 summarizes the results of the interviews.

#### 5.1.1 Definitions of mainstreaming and climate proofing

In Chapter 2, definitions of mainstreaming and climate proofing were derived from the literature. These definitions are used later for the purposes of assessing the status of the EFIs with respect to climate proofing their portfolios. However, given the broad use of the terms with varying definitions and applications, obvious questions arise: how do the EFIs define these terms? Do they agree with the definitions found in the academic

and gray literature? If not, how do they differ? Thus the EFIs were asked to define both mainstreaming and climate proofing.

With respect to mainstreaming climate change, eight of the EFIs had a similar definition as Klein *et al.* (2007 p. 25), which was presented in Chapter 2:

Mainstreaming involves the integration of policies and measures that address climate change into development planning and ongoing sectoral decision-making, so as to ensure the long-term sustainability of investments as well as to reduce the sensitivity of development activities to both today's and tomorrow's climate.

Where the definitions varied slightly from Klein *et al.*, was in the emphasis on integration into their own operations versus the more broad vision of development and sector decision making. The definition of the ninth EFI was activity based, focused on how to implement a specific element within the process, for example Joint Implementation, a mitigation mechanism set out in the Kyoto Protocol. Additionally, this EFI was focused only on mitigation activities, whereas the other eight definitions were applied to both adaptation and mitigation. In fact, all eight indicated that mitigation was already mainstreamed in their processes and procedures, though not climate change risk management.

When asked to "define climate proofing", four EFIs responded that they did not like the term because it is impossible to "proof" anything. The term that they preferred is climate resilient. But having said that, each of the four, along with three other EFIs, gave a definition of climate proofing closely related to that derived in Chapter 2:

Identifying risks to a project due to climate change impacts, both current and future, and ensuring that changes are implemented within the project cycle to reduce the risks to acceptable levels and thus making the project resilient to climate change.

In their definitions however, the EFIs usually mentioned that the changes should be reasonable with respect to both economic and resource costs in relation to what is to be achieved with climate proofing, more in line with the Baltzar *et al.* (2009) definition.

For the definition of climate proofing, two EFIs defined it only in terms of mitigation and the reduction of greenhouse gases. Climate proofing was ensuring that projects were as energy efficient as possible or were contributing to the mitigation of greenhouse gases. The other seven EFIs defined climate proofing in terms of both adaptation and mitigation. However, these EFIs focused more on adaptation as it is a newer issue, implying that mitigation was better known and already mainstreamed.

The majority of the EFIs had similar definitions for both mainstreaming climate change and climate proofing. What is interesting to note, is that those EFIs that gave definitions only in terms of mitigation, are EFIs that felt their portfolio was not at risk to climate change in the near future.

### 5.1.2 What percentage of the EFIs portfolios are at risk from climate change?

In Chapter 4, screening of an EFI's portfolio for climate change risk was discussed as an important first step in climate proofing not only its current portfolio but, also ensuring that current and new projects are resilient to climate change as well. Entering the interviews with the assumption that this type of screening had been done, each of the EFIs was asked what percentage of its portfolio is at risk from climate change. Of the nine EFIs, none had done any type of systematic screening of its current portfolio. As introduced in Chapter 4, there are a number of different tools available to aid organizations like the EFIs to screen their portfolios for climate risk. However, until

now, none of the nine EFIs has used one of these tools, or a tool of its own, to screen its current portfolio.

Four of the EFIs had made estimates of the vulnerability of their current portfolio. They estimated the risk from climate change based on the percentage of their portfolio in vulnerable sectors or regions. The estimates ranged from two EFIs at around 5%, and two over 40%. Of these four, only two have plans to do a systematic screening in the future; one with a low estimate and one with the higher estimate. Additionally, two other EFIs also are in the process of attempting to screen their portfolio. However all four are in the very early stages. The other five EFIs have no plans to screen their portfolio at any time in the near future.

### 5.1.3 What type of climate change risk assessments are done by the EFIs?

Climate change risk assessments are the basis for climate proofing projects and therefore the portfolio. As seen in the discussion of the project cycle, risk assessments are useful at each step. Without an assessment it is difficult to determine what changes might need to occur to make a project more resilient to climate change. Therefore each of the EFIs was asked what types of climate change risk assessments were being done. Only one EFI was systematically doing assessments for each of its projects. Five of the remaining eight EFIs are not doing anything systematically currently and three are not doing anything at all.

The EFI which is assessing its projects systematically, does so in two steps. The first step is a screen to check if the project meets certain criteria which may make it vulnerable to climate change risk or if it is in a region or sector that has been identified as high risk. This is accomplished via a checklist. This takes place at the project identification step of the project cycle. If the project does not pass the screen, then step two is a request to the consultants doing the project feasibility and implementation studies to also do an in-depth assessment of climate risks. Approximately 10-20% of the projects screened with the checklist require an in-depth assessment of climate risks. Note here that the risk assessments are not carried out by the EFI, but are requested of the consultants of the project promoter. All the EFIs agreed that the type of knowledge needed to carry out this level of risk assessment is not usually in house and it should be the responsibility of the project promoter. As will be discussed later, this can be an obstacle.

The in-depth risk assessment may be carried out using one of the tools introduced in Chapter 4. Usually the EFI has an opportunity to review the Terms of Reference before the assessment is undertaken. The resulting assessment is then reviewed by the EFI as part of the appraisal step of the project cycle and prior to approval.

Five of the EFIs are not yet doing regular climate change risk assessments but all are in various stages of developing and implementing a more robust process. Each of the five EFIs stated that there are some assessments taking place on an ad hoc basis, usually in those sectors where there is obvious potential for risk from climate change, such as the water sector, but all agreed a more systematic approach needs to be taken. Though all five are actively pursuing activities to integrate risk assessments into the project cycle, each emphasized the difficulties it faced in successfully doing so. These obstacles will be discussed later in this chapter.

The three other EFIs are not doing any formal climate change risk assessments other than what arises in normal project due diligence. For example, during the credit risk assessment for a hydro project, it might be determined that the revenue stream of the project could be at risk due to impacts from climate change, such as drought. In this

case, the EFI would take this into account where appropriate, perhaps requesting a change in the design of the project. These EFIs stated that their risk assessments were focused only on the usual forms of risk like operational and credit risk as well as environmental and social risks. In other words, they are very emissions driven. Additionally, it was mentioned by one EFI that the timing of possible climate change impacts in its regions of operation was so far out into the future, possibly 40 to 50 years that the impacts are not expected during the life of a loan. Therefore the impacts are considered to be an irrelevant risk to the EFI and its investments at this time.

#### 5.1.4 What climate change scenarios do the EFIs use?

The purpose of this question was to understand what scenarios and level of detail the EFIs used as a basis to estimate possible climate change risks. This question was only relevant to the six EFIs that were already requiring risk assessments where necessary or planning to do so in the future. It was generally agreed that the IPCC was a starting point but that it actually depended on the project and the region. Local and sectoral data is preferred when available. For example, one of the EFIs looks for climate data, water levels and elevation. However often this data is not available or not reliable. This makes it very difficult to be consistent project to project.

#### 5.1.5 What tools do the EFIs use for climate change risk screening?

As mentioned, contrary to expectations, only one EFI is doing a systematic assessment of new projects for climate change risks and none have done a screening of their portfolios. Therefore, for all but one EFI, the question was not relevant. So the question was changed to 'what tool do you think would be useful for climate risk screening?' As discussed in the previous section, the EFI that already is doing risk assessments uses a guideline tool that is a kind of checklist. With respect to screening its portfolio, it has not yet chosen a tool. The EFI that started its process in 2007 but has not yet implemented anything, developed a 'vulnerability' tool which is a set of guidelines and questions. It also can be seen as a type of checklist to screen for climate risk. However, the EFI determined that the tool was not useful for its project officers, so there is now a pilot being developed in which the tool will be used in different countries with varying levels of information, to see if the tool can be improved. As part of this pilot, other tools – some of which are mentioned in Chapter 4 such as ADAPT - will be reviewed and compared to see if there are parts which can be incorporated in order to develop a more useful tool for the project officers.

The other three EFIs that are in the process of implementing climate change risk management are all actively trying to find a tool that will help them better assess the risks. However, they all agree including the other two EFIs mentioned above, that it is not an easy task. As one EFI pointed out, it is particularly difficult to find a tool that fits all projects. Also a different type of assessment is done at the project identification phase than is done during the appraisal phase. In the identification phase, a methodology is needed that can assess "broadly but rather precisely" what the climate change risk exposure is. If the exposure is determined to be high then a request for an in-depth risk assessment can be made to the project promoter. This may mean that another type of tool is needed to help the project teams during the appraisal phase when reviewing the in-depth risk assessment. The team needs to know the "relevant aspects to take into consideration" when performing due diligence with respect to climate change.

### 5.1.6 What processes are in place to respond to risk assessments?

This question was intended to discover if the EFIs were responding systematically to the risk assessments that were being done. It could be that an EFI is doing risk assessments but has no processes to respond. The one EFI that is doing assessments uses the project cycle to respond. In the project identification phase the initial screen is done. If the project does not pass the screen, an in-depth assessment is requested and that is reviewed during the appraisal phase. As the project moves through the cycle the various entry points outlined in Chapter 4 are utilized to ensure that the risk is monitored and changes made when necessary.

Because the other EFIs are not yet doing systematic assessments, the questions was rephrased to “what processes do you envision developing to respond to risk assessments?” As these EFIs are all in various stages of development with regards to climate change risk management, and none have anything board approved, it was difficult for them to provide anything concrete. However, they all mentioned the use of their project cycle as a part of any envisioned process.

### 5.1.7 What criteria are used to measure success of actions taken?

Criteria can be used not only to evaluate the success of actions taken, but also to provide information to improve future actions and future projects. If an evaluation shows that a certain action did not achieve the intended result, that information can be incorporated into future projects of a similar type. The result may be that in the new project the action is altered or perhaps not taken at all. When asked what criteria are used or envisioned, a majority of the EFIs initially answered that it was nearly impossible to measure success of actions taken against climate risk. This, they stated, is because it is difficult to measure the success of adaptation efforts because of the long time horizon, usually longer than the term of the loan. Additionally, if the expected impact does not occur, it is unclear how to measure if the actions taken would have been successful. However, these same EFIs agreed that although it is difficult to define criteria, it is necessary.

Three EFIs stated that they measure the success of actions taken against climate change risk during the monitoring and evaluation steps of the project cycle. During the monitoring step, the EFI checks that the contract conditions of the project are being met and at the end of a project an ex post evaluation is completed in which the efficiency of climate change actions taken during the project life is evaluated. For these EFIs, the criteria are in terms of mitigation efforts such as whether or not the project exceeded its GHG emissions target.

The other six EFIs are trying to develop a set of criteria against which to measure the success of actions taken, but none of them has approved a final set. Possible indicators mentioned are ex post indicators – was a risk assessment done? Were identified responses implemented? Process indicators – was the client satisfied with the expertise made available regarding climate change risk? Did the process work well internally? Adaptation indicators – how well did a project contribute to adaptation? For example, a project to rehabilitate a water network will prevent leakages. Therefore it is an adaptation project. At the end of the project an indicator might be, how many cubic meters of water were saved? There are many ideas, but they are all still in development. Each of these EFIs agreed that finding the appropriate measures will be much more challenging compared to finding measures for mitigation.

#### 5.1.8 Other information from interviews

In the course of the interviews, other information surfaced beyond the scope of the questions. When discussing the topic of mainstreaming, all of the EFIs stated that mitigation and environmental policy were mainstreamed within the institution. One example given is the Environmental Impact Assessments (EIAs). These are now included in all the EFIs policies and procedures and are part of the environmental risk assessment during the appraisal step of the project cycle. Additionally, they indicated that it had taken time, but that it was an iterative process which allowed a “push-pull” interaction to take place for a more successful integration. One example given was of a carbon foot print manual (a mitigation tool). There was a mandate for the manual and it was developed with the relevant EFI experts. The manual ‘s methodologies are now being applied and the users are coming back with improvements and lessons learned. Through this interactive, iterative process, the manual continues to improve because it is being used and applied by those staff that helped design it. It becomes a virtual feedback loop. This may be a key aspect to mainstreaming climate change.

Working together and sharing ideas regarding climate proofing and adaptation was another topic that was continuously mentioned throughout all of the financial institutions’ interviews. Successful climate proofing of investments does not appear to be a core competency of an EFI. It does not give the EFI a competitive edge if it does climate proofing well. Therefore, working with other financial institutions to share best practices, learnings and tools is not a problem. It is a more efficient use of resources.

One other issue became apparent from the interviews. EFIs developing a climate proofing process do not have definite timetables for implementation. It is uncertain how long the development process will take. One EFI is just defining its terms of reference to begin scoping the process. Another EFI is refining the tool it developed in 2007, trying to improve the process and reintroduce into its project cycle. Another EFI is in the middle of developing a process but does not know when it will be completed and approved by its Board.

Table 5.1 provides a summary of each of the EFI's climate proofing activities. The results are varied. On one end of the spectrum is a BFI that has nearly completed implementing a climate proofing process, while on the other end are two MFIs and one BFI that are not implementing a process and have no plans to do so in the near future. The other five EFIs are in various stages of developing a process. Thus, the majority of the EFIs participating in the research are actively trying to climate proof their investments.



Table 5.1 Summary assessment of EFIs' climate proofing activities

<i>Interview responses</i>	Multilateral Institutions						Bilateral Institutions		
	EFI 1	EFI 2	EFI 3	EFI 4	EFI 5	EFI 6	EFI 7	EFI 8	EFI 9
Definition of mainstreaming similar to research?									
Definition of Climate proofing similar to research?									
Has the EFI screened its portfolio for CC risk?									
Does the EFI do risk assessments for CC?									
Does the EFI use scenarios in its assessments?									
Does the EFI have tools to do assessments?									
Does the EFI have processes to respond?									
Does the EFI have measures for success?									
<i>Other information from interviews</i>									
Does the EFI have an environmental policy?									
Is mitigation mainstreamed?									



= NO

= Not doing systematically and/or is in the process of developing

= YES

## 5.2 What obstacles do EFIs face when climate proofing their investments?

This question was asked in order to understand any possible shortcomings with respect to the EFIs' climate proofing actions. Not only the EFIs were asked this question but also the other non-European multilateral financial institutions' (NEFIs) and the NGOs. There were three recurring answers among them: 1) owner/management, staff and client "buy in" 2) uncertainty of impacts 3) data, models and tools. Each of these will be discussed below.

A very important obstacle that all of the EFIs and NEFIs face when attempting to climate proof their investments, is the lack of recognition of its importance by one or all of the stakeholders in the process. As one respondent explained it, "it is an obstacle to convince each and every one, both in-house and out, that climate change is a major issue." For example, one respondent said "management still does not perceive climate change as a serious risk worth considering during loan appraisal." One reason management has this view, is that its portfolio is in regions not particularly affected by climate change yet. Thus, climate change risk is not a priority on this EFI's agenda.

From the staff perspective, one respondent stated “that if the program is not driven by the staff, but is imposed upon them, the staff will become an obstacle and the program will not be effective.” This tension between management and staff when implementing a process of this type was defined by one EFI as “push-pull”. In other words, it cannot be only a mandate from management nor only a bottom up approach but both together – a push from management and a pull from staff.

Another stakeholder in the process is, of course, the client or project promoter. An obstacle that all the EFIs and NEFIs face with respect to this group is that “they sometimes lack understanding of the issue and are reluctant to pay additional costs that might be imposed to address the issue.” As one respondent put it “It is a big issue, convincing our borrowers what is in their best long term interests.” An additional obstacle related to this group, is the regulatory constraints of the promoter. Often a promoter is legally bound to follow local standards and codes, which may not be the same as what is required in order to make the project more resilient to climate change.

A second obstacle identified by a majority of the respondents is the uncertainty of the impacts. “Anything we evaluate has a huge range of uncertainty. Uncertainty itself poses a risk, uncertainty of whether or not an impact happens or whether or not there is some other impact that is unforeseen.” Another respondent described the issue this way: “The hardest part is the uncertainty of what is going to happen in the future. It depends on the scenarios, it depends on the climate models used, and at the end you are not able to say that the action you take is the best solution.” This uncertainty can then be compounded by the third obstacle identified – tools, data and models.

As introduced in Chapter 4, although there is a wide range of tools available to use in climate change risk management, generally they have limited applicability (Ludwig & Swart 2010). One EFI said that “it is difficult to find a tool that is useful for project people. We need a tool that is able to provide concrete advice to the project team and promoter and that does not exist yet.” And if it did exist, there is still a problem with the availability and reliability of climate change data and models that are usually inputs to these tools. For example, since the breakup of the Soviet Union, hydrological data such as rainfall, river flows, etc, have not been measured accurately in countries like Kyrgyzstan, so there are huge gaps in the model inputs. This makes it difficult to assess how vulnerable a project like hydro power might be to climate change impacts. Additionally, models may not be precise or accurate enough to give the level of detail needed to design proper adaptation responses or they may disagree. As one respondent explained: “you have certain areas where half the models show increased precipitation and the other half show decreased precipitation. The question then is, which one should be used? How does one account for this as an investor?” These are difficult obstacles to overcome.

### 5.3 Are the EFIs leaders in climate proofing their investments?

The EU is eager to continue to project itself as a leader in climate change policy (Adelle *et al.* 2008). Historically, it has shown leadership in the negotiation of the Kyoto Protocol targets (Gupta & Ringius 2001) and in influencing instrumental countries, such as Russia, to sign the Kyoto Protocol, allowing it to enter into force. Additionally, the EU introduced the first carbon market in 2003 (Adelle *et al.* 2008).

More recently, the European Council has “underlined the leading role of the EU in international climate protection”(EC 2007 as cited in Adelle *et al.* 2008 p.19 ) and the EC emphasizes the EU’s “international leadership on climate issues” (EU 2007b p.11).

Gupta and Ringius (2001 p.282) argue that the EU can be a directional leader. The directional leader leads by example - proving that a goal is feasible, it is not “merely ahead of the crowd” but influences others efforts. For example, prior to negotiations at COP 15, the EU set ambitious targets in relation to climate change in order to show its willingness to act. The EU is also calling on other developed countries, including candidate countries, to make similar commitments (EU 2007c). To lead by example, is not only the setting of ambitious targets but also following through with actions. In order to do this, as outlined in Chapter 1, climate change needs to be mainstreamed into the policies and the institutions of the EU. As institutions supporting the efforts of the EU and its member states, the EFIs have an opportunity to support the leadership aspirations of the EU by leading with their own policies and actions.

The leadership of the EFIs was assessed in two different ways. First, during the interviews, each participant, including the other financial institutions and NGOs, was asked “*who is a leader in the area of climate change risk assessment?*” to see if there is a perceived leader. Second, the results of the EFI’s interviews, as tabulated in Table 5-1, were compared to assessments of other NEFIs’ policies and actions as determined from the literature review and interviews.

When asked the question regarding a leader, the nearly universal first response was: “there is no leader”. One respondent said “most institutions are in the same stage, it is a work in progress”. Another answered “there is no clear leader; we are all in this together”. These answers are representative of the other respondents’ replies. Most interviewees followed up with suggestions of possible leaders, usually one of the NEFIs, the World Bank (WB) and the Asian Development Bank (ADB) most often mentioned. However, these comments were qualified with statements such as “they seem to be doing good work, but whether they are leaders in practical application remains to be seen.” Based on the interviews, there does not appear to be a perceived leader, “nobody has clear answers, we are all struggling”.

Based on the summary assessment in Table 5-1, EFI 8 appears to be the leader with respect to the other EFIs. It is systematically assessing climate change risk and has tools and procedures to respond. Although, there are some aspects such as measurements and portfolio screening that are still in process, the other EFIs are still in the development stage for incorporating climate proofing into their policies and actions.

When compared to other NEFIs, EFI 8’s position is not as clear. The NEFIs reviewed, ADB, WB, African Development Bank (AfDB) and International Finance Corporation (IFC) have been active in this area since 2007 (AfDB *et al.* 2007). At that time, these IFIs met with three other IFIs to discuss, among other things, their response to climate change risks, outlining the efforts of each of the banks in this area. At that time, AfDB was planning on incorporating climate change risk management into its processes, the World Bank was developing a tool (ADAPT) and AfDB and ADB also had plans to develop a tool. Additionally, the WB had done portfolio screenings of its portfolio. In the time since, these institutions have followed up on these plans, with tools announced by both AfDB and ADB in 2009. The World Bank has supplemented its original tool with an information portal which has vetted data and guidelines for its staff and customers. Neither AfDB nor ADB have done portfolio screenings to date. The documents of all of these NEFIs indicate a policy for climate change risk management, but it is difficult to assess how far these institutions are in practice. However, based on this documentation and the interviews there does not appear to be a clear leader within the group. Although the information available is not easy to compare, based on

the documentation and interviews, EFI 8 appears to be at approximately the same stage as the other NEFIs.



## 6 Discussion and recommendations

As discussed in Chapter 1, adaptation “has finally emerged as a legitimate – and in some cases – urgent policy priority” (Parry *et al.* 2005, p.2-3). The EU responded to this urgency with its White Paper in which it introduced a framework to mainstream adaptation across its institutions, policies and sectors (EU 2009). As EU institutions, it is expected that EFIs will play a significant role in helping the EU meet its goals with respect to adaptation (EU 2010). As shown in Chapter 2, climate proofing can be seen as a phase of mainstreaming adaptation. Therefore, one way the EFIs can support the EU’s goals is by climate proofing their investments. However, as seen in the Chapter 5, the EFIs may not yet be living up to this expectation. The following section discusses why that may be the case and Section 6.2 offers recommendations.

### 6.1 Discussion

Of the nine EFIs interviewed, only one has a systematic process in place to climate proof its investments. Although the issue of climate proofing is not new to the EFIs (AfDB 2007), for six it has not been a priority until recently and for three EFIs it is still not on their agenda. There are a few reasons for this situation.

A reason given by two EFIs for not yet pursuing a climate change risk assessment process is that the timing of climate change impacts in its regions was so far into the future, possibly 40-50 years, that the impacts would not occur during the life of the loan, therefore they are not considered to be a relevant risk. This may be the true if the project life is only as long as that of the loan, but generally that is not the case. Often the project life does extend 40 to 50 years, leaving the investment vulnerable if not the loan. Often projects like infrastructure have a significantly longer life span than that of the loan financing it (Agrawala *et al.* 2008). Additionally, although the impacts are seen to be far in the future, it was agreed that there was a likelihood that they would occur. Given that scenario, it may be more efficient for an EFI to begin the learning process now, while it has time, rather than later.

One respondent stated that the EFI was not focused on climate change risks because management did not think it was an important issue. So even though there was some ‘pull’ from the climate and environmental groups within the EFI to address climate change impacts in the loan process, there was not an yet an endorsement, or ‘push’ from higher up. This implies that some are all of the Member States that participate in this EFI may have not yet made climate proofing a priority.

Another reason why the EFIs may not be as far along in implementing a climate change risk assessment process is that it was not on their agenda until recently, even though they were aware of the issue. However, due to various factors, climate proofing has come to the forefront. One factor is the confirmation from the scientific community that impacts from climate change cannot be avoided, even if GHGs are reduced to pre-1990 levels (EC 2009). Additionally, the EEA issued a report outlining those regions most vulnerable to the risks of climate change (EEA 2008). And lastly, the EU White Paper has made mainstreaming adaptation a priority and by association made it a priority for its Member States and institutions. Thus, climate proofing is now an important issue for six of the EFIs yet it is not obvious how quickly they can react.

As seen in Chapter 5, five EFIs are developing a climate change risk management process. However, when asked what the expected timing for implementation was, no clear timeline could be given. This may be because, as one respondent stated, with

respect to climate change risk management “nobody has clear answers, we are all struggling.” The relevant aspects of other types of risks a project may face, such as credit or environmental, are already known to the EFI, but because adaptation and climate change risk are only being recently considered, there is a knowledge gap within the EFIs that needs to be filled.

One knowledge gap is regarding tools that should be used. There are a number of tools available, but their diversity makes “it difficult to find a tool that fits”. Olhoff and Schaer (2010) took stock of what tools are available, but no detailed comparisons have been made of the methodologies nor of the results. This analysis might provide insights into which tools may be appropriate for the EFIs (Olhoff & Schaer 2010). The more specific the tool, the more likely an EFI can identify and respond to climate change risks (Eriksen *et al.* 2005).

Another data gap is lack of indicators of success. Indicators are particularly important in the monitoring and evaluation phases of the project cycle. However, as seen in Chapter 6, there is no common thinking on what is an appropriate indicator. Although no EFI has settled on a set of indicators, there are various types under discussion. These vary from process indicators to adaptation indicators to ex post evaluation indicators.

Climate change is just another risk that an EFI should take into account when considering a project (Agrawala *et al.* 2008). Via the project cycle, the EFIs have a process to assess and manage risks but because of knowledge gaps and other obstacles described above, it is not an easy task to develop and implement a climate proofing process for their investments.

## 6.2 Recommendations

The EU has made mainstreaming adaptation a key pillar of its climate change policy. As institutions of the EU, the EFIs can support the adaptation policy in a number of ways such as making funds available for adaptation projects as well as climate proofing their current portfolio and future investments. As defined in Chapter 2, climate proofing can be seen as a phase in the mainstreaming process. However, based on the interviews of the EFIs, climate proofing is only just beginning, and in some cases not taking place at all.

Some of the EFIs have the endorsement of its Member States to make climate proofing a priority, while those not pursuing climate proofing do not. This implies, that at this point in time, some Member States may not be supporting the efforts outlined in the EU White Paper. However, the framework was only recently issued, therefore it may be too early to say what its impact on the Member States will be. The EU should continue to pursue its mainstreaming efforts and ensure the implementation and expansion of the White Paper framework. This means ensuring that the Member States take on the actions outlined for them in the framework. Internal awareness of climate change by the Member States can lead to their high level endorsement, or ‘push’, of climate proofing to the EFI level.

In order to efficiently integrate climate proofing into their policies and procedures, EFIs could do ex post evaluations of the mainstreaming of mitigation and the implementation of EIA requirements. Climate change risk, though more uncertain with respect to the science and the methodology is still similar to mitigation in that it is a new risk that needs to be accounted for in the various phases of the project cycle. Like mitigation ten years ago, climate change risks are outside the normal risks previously considered by financial institutions. Therefore there was not a lot of expertise

regarding mitigation when it was integrated into the EFIs. However, all the EFIs stated that mitigation was now mainstreamed within their policies and procedures. In some cases, it took ten years to mainstream mitigation. However, by doing an ex post evaluation of the mainstreaming of mitigation now, it is possible to incorporate the lessons learned into the process of integrating climate proofing. This could lead to a more efficient and timely integration of climate proofing than was experienced with mitigation.

Further, climate change impact assessments are similar to EIAs in how they could be incorporated into the appraisal phase of the project cycle. Although EIAs look at the impacts the project has on the environment and climate change risk assessments look at the climate's impact on the project, each is an assessment that has to be considered. Additionally, when EIAs were introduced there was also little experience in that area at the EFIs. That experience increased over time and now EIAs are a standard risk considered by all the EFIs. Thus, an ex post evaluation of the EIA implementation process could help the EFIs more smoothly incorporate climate change risk assessments into their procedures, once they have developed a climate proofing process.

Currently the EFIs have formed a working group where they share best practices. Each EFI stated that this was an important part of their learning process with respect to climate proofing and adaptation. Based on these statements it would appear that climate proofing is not a competitive advantage for an EFI. Therefore, it does not put an EFI at a disadvantage to be actively working with other EFIs to develop and implement a climate proofing process. As outlined in the previous section, there are gaps in the EFIs' knowledge with respect to key elements of any climate proofing process which could be more efficiently addressed if the EFIs actively work together in these areas. In the interviews it was stated by two EFIs that it was difficult to work too closely with the others because of their differences. However there may be enough similarities in some areas where working together makes sense.

The EFIs do differ in a number of ways: size, structure, mandate and culture to name a few. However, there are similarities as well. The EFIs operate in many of the same sectors and regions. Many of the EFIs have some of the same owners. For example, Germany has ownership in EIB, EBRD, CEB and KfW. Additionally, they all follow similar procedures like the project cycle, though their assessment criteria may differ. Therefore there are areas where the EFIs might be able to work together.

One area where it may be more efficient to work together is in the area of climate change risk screening tools and guidance. Although Olhoff and Schaer (2010) took stock of a number of the tools and guidance available to date, a comprehensive comparison of methodologies and results has not been done. A sub-group of the EFIs could identify the tools that may be relevant and do a systematic review to identify those which might be useful to further test. Pilot testing could then be coordinated so that there is not a redundancy of effort and so that the results could be shared and incorporated in further testing or in an EFIs climate proofing process. Currently, if this work is being done, it is being done separately by each EFI.

Another area where the EFIs could work together is regarding data and models. By identifying what is available and what is needed, the EFIs could pool resources to try and influence and support the development of the necessary information. The working group could form sub groups that are each responsible for a region or a sector. An additional benefit would be that clusters of knowledge are created that could be called on to provide guidance until the EFIs develop that level of knowledge in-house.



Lastly, the EFIs could work together to develop indicators to measure the success of their actions in response to climate change. Though the EFIs projects may not be exactly the same, they are often the same type, in the same sector or in the same region. Therefore, a base set of indicators could be defined which could be applied to most if not all projects. Other indicators could be included when relevant to the project. However by having a base set of indicators, the EFIs would have a common measurement that could be used to compare their projects. This could be very useful when sharing best practices. By sharing common indicators, the results of an EFI's evaluations could be more easily incorporated into future projects of other EFIs. Thus the learnings from climate proofing actions would be increased at all the EFIs participating, hopefully resulting in more successful climate proofing of their investments.

## 7 Summary and conclusions

This report is an examination of the current climate proofing activities of the European financial institutions (EFIs) as one step in mainstreaming adaptation. This was accomplished via a literature review and expert interviews. A definition of the term 'climate proofing' was derived in order to have a common basis from which to assess the EFIs activities. Nine EFIs participated in the research and their lending practices and mandates were introduced and examined. A review of possible ways an EFI might achieve climate proofing was undertaken, looking at available tools and guidelines and how an EFI could incorporate them into its processes. This was followed by an assessment of the current practices of the EFIs based on results from the interviews.

Based on the project focus of the EFIs a definition of 'climate proofing' was synthesized from the literature: Identifying risks to a project due to climate change impacts, both current and future, and ensuring that changes are implemented within the project cycle to reduce risks to acceptable levels and thus making the project more resilient to climate change. This definition was used to assess the climate proofing activities of the EFIs.

As significant resources are required from the EFIs to adapt to climate change (EU 2010), the mandates and the operations of the EFIs were reviewed. Nine EFIs participated in the research, six MFIs and three BFIs. While MFIs are acting on behalf of multiple owners, BFIs are formed to fund the development projects of an individual country. An analysis of the EFIs participating in the study highlights three common points. First, each of the EFIs is owned partially or wholly by EU Member States. Second, all the EFIs are making significant lending commitments in those sectors and countries which have been identified as vulnerable to climate change impacts. And third, all the EFIs have a similar commitment to the environment.

Having determined that the EFIs investments are often in vulnerable sectors, this research examined how they might climate proof their portfolio now and in the future. Two steps were envisioned: First, an EFI can screen its existing portfolio for risks from climate change and second, climate proofing of current and future projects can take place via the EFIs project cycle. Portfolio screening enables an EFI to identify those projects that are vulnerable to climate change risk and to modify the projects to either adapt or take advantage of opportunities arising from climate change (OECD 2009). There are a number of tools and guidance available to aid in the screening for climate change risks. However review of the methodologies and the results of these tools has not yet been done, therefore it is difficult to determine what tool might be appropriate for an EFI.

All the EFIs participating in the research manage their investments through a basic project cycle. This is a way for the EFI to assess the viability of a project by ensuring that all the relevant risks are taken into account during the life of the project. Though each step of the cycle provides an entry point for assessing climate change risks, the EFIs have the most influence during the project identification and appraisal steps. Based on the assessments the EFI may require changes to the project design to make the project more resilient or to take advantage of opportunities from climate change. Alternatively, the EFI may decide not to proceed with the project at all.

Nine EFIs were interviewed in order to assess their climate proofing activities. The results were varied. On one end of the spectrum is an EFI that has nearly completed implementing a climate proofing process, while on the other end are three EFIs that are not implementing a process and have no plans to do so in the near future. The

other five EFIs are in various stages of developing a process. Thus, the majority of the EFIs participating in the research are actively trying to climate proof their investments. The results of the interviews were also used to assess if the EFIs were leaders in climate proofing. The EFIs were compared to other non-European financial institutions (NEFIs). Based on the documentation and the interviews the NEFIs reviewed are ahead of most of the EFIs, with the exception of one EFI that appears to be at approximately the same stage as the NEFIs.

Although the issue of climate proofing is not new to the EFIs (AfDB 2007), for six it has not been a priority until recently and for three EFIs it is still not on their agenda. There are a few reasons for this situation.

Not all the EFIs have the endorsements of their Member States to make climate proofing a priority. The EU should continue to pursue its mainstreaming efforts and ensure the implementation and expansion of the White Paper framework. Internal awareness of climate change by the Member States can lead to their high level endorsement, or 'push', of climate proofing to the EFI level.

EFIs are struggling on how they can integrate a climate proofing process into their current procedures once the process is developed. One recommendation is to do ex post evaluations of the mainstreaming of mitigation and the implementation of EIA requirements. Climate change risk and risk assessments, though more uncertain with respect to the science and the methodology are still similar to mitigation and EIAs in that it is a new risk that needs to be accounted for in the various phases of the project cycle. By doing an ex post evaluation, it may be possible to incorporate the lessons learned into the process of integrating climate proofing. This could lead to a more efficient and timely integration of climate proofing than was experienced with mitigation EIAs.

All the interviews highlighted that the EFIs face knowledge gaps in the area of tools, data and models and indicators for measuring success of climate proofing actions. Therefore the EFIs could work together to fill these gaps. A sub-group of the EFIs could do a systematic review of the relevant tools to identify those which might be useful to further test. A coordinated effort would minimize redundancy and the results could be shared among the EFIs.

The EFIs also could work together regarding data and models. By identifying what is available and what is needed, the EFIs could pool resources to try and influence and support the development of the necessary information.

Lastly, the EFIs could work together to develop indicators to measure the success of their actions in response to climate change. The EFIs would have a common measurement that could be used to compare their projects. This could be very useful when sharing best practices. By sharing common indicators, the results of an EFI's evaluations could be more easily incorporated into future projects of other EFIs.

The research indicates that although adaptation is now an important issue for many EFIs, it is still in the early stages of being mainstreamed into their policies and procedures. The 'push' from the EU and their member states will keep the issue a priority but filling in the knowledge gaps is necessary in order for them to be successful.

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## Annex A List of participants

Organization	Name	Title
<i>European Multilateral Financial Institutions</i>		
Black Sea Trade and Develop. Bank	Mircea Cojocaru	Head - Environment
Council of Europe Bank	Anton Spierenburg	Tech. Adviser Env.
EBRD	Craig Davies	Principle Env. Adviser
European Investment Bank	Andrea Pinna	Lead, CC
European Investment Bank	Christoph Gleitsmann	Adviser, water & CC
European Investment Bank	Giulia Macagno	Env. & Social office
European Investment Bank	Nancy Saich	Tech Adviser
Nordic Environment Finance Corp	Karl-Johan Lehtinen	Sr. Mngr. Env. Affairs
Nordic Investment Bank	Johan Ljungburg	Sr. Director – Environment
<i>European Bilateral Financial Institutions</i>		
Agence France Development	Olivier Grandvoinet	CC mitigation
Agence France Development	Sabrina Archambault	CC adaptation
FMO	Charlotte van Andel	Env. & Social Specialist
KFW	Jochen Harnisch	VP CC Policy
<i>Non European Multilateral Financial Institutions</i>		
International Finance Corporation	Alan Miller	Climate risk
International Finance Corporation	Vladimir Stenek	Climate risk
World Bank	Ian Noble	Lead climate specialist
World Bank	Karin Pandey	Sr. Env. economist
World Bank	Walter Vergara	Global Lead-adaptation
<i>Commercial Social Bank</i>		
ASN Bank - NL	Mariëtta Smid	Sr. Adviser sustainability
<i>Consulting Firm</i>		
Baastel Consulting	Gaetan Quesne	Consultant-Environment
<i>NGOs</i>		
Both ENDS	Anouk Franck	
Both ENDS	Wiert Wiertsema	
Bankwatch	Petr Hlobil	



## Annex B List of interview questions

### Interview questions – EFIs, NEFIs and commercial social bank

1. How long have you been working in the climate change area?
2. How long have you been working for the bank?
3. How do you define mainstreaming climate change?
4. How do you define climate proofing?
5. What risk assessment does the bank do with respect to climate change?
6. What climate change scenarios does the bank use?
7. What tools or guidelines does the bank use for climate risk screening?
8. What proportion of the banks' investments, both current and in the pipeline, are vulnerable to climate change?
9. What processes are in place to respond to the risk assessments?
10. What criteria do you use to measure the success of actions taken against climate risk?
11. What are the biggest obstacles the bank faces with respect to climate change risk?
12. Who is a leader in the area of climate change risk assessment?
13. Is there anyone else with whom you think I should speak?

### Interview questions – NGOs and consulting firm

1. How long have you been working in the climate change area?
2. How long have you been working for your firm?
3. How do you define mainstreaming climate change?
4. How do you define climate proofing?
5. What do you know about risk assessments the multi and bi-lateral banks do with respect to climate change?
6. What climate change scenarios should the banks use?
7. What do you know about the tools or guidelines the banks use for climate risk screening?
8. In what way do the banks respond to climate change risk?
9. How should the banks measure success of their actions taken with respect to climate risk?
10. What more could the banks do to minimize climate change risk?
11. What are the biggest obstacles the banks face with respect to climate change risk?
12. Who is a leader in the area of climate change risk assessment?
13. Is there anyone else with whom you think I should speak?



## Annex C EIB Ownership

Country	% Ownership	Country	% Ownership
Germany	16.17%	Czech Republic	0.76%
France	16.17%	Hungary	0.72%
Italy	16.17%	Ireland	0.57%
United Kingdom	16.17%	Romania	0.52%
Spain	9.70%	Slovak Republic	0.26%
Netherlands	4.48%	Slovenia	0.24%
Belgium	4.48%	Bulgaria	0.18%
Sweden	2.97%	Lithuania	0.15%
Denmark	2.27%	Luxembourg	0.11%
Austria	2.22%	Cyprus	0.11%
Poland	2.07%	Latvia	0.09%
Finland	1.28%	Estonia	0.07%
Greece	1.22%	Malta	0.04%
Portugal	0.78%		

Source: EIB 2010c



## Annex D EBRD Ownership and countries of operations

Ownership			
Albania	EIB	Kyrgyz Republic	Romania
Armenia	European Union	Latvia	Russian Federation
Australia	Finland	Liechtenstein	Serbia
Austria	FYR Macedonia	Lithuania	Slovak Republic
Azerbaijan	France	Luxembourg	Slovenia
Belarus	Georgia	Malta	Spain
Belgium	Germany	Mexico	Sweden
Bosnia & Herzegovina	Greece	Moldova	Switzerland
Bulgaria	Hungary	Mongolia	Tajikistan
Canada	Iceland	Montenegro	Turkey
Croatia	Ireland	Morocco	Turkmenistan
Cyprus	Israel	Netherlands	Ukraine
Czech Republic	Italy	New Zealand	United Kingdom
Denmark	Japan	Norway	United States of America
Egypt	Kazakhstan	Poland	Uzbekistan
Estonia	Korea, republic of	Portugal	

Source: EBRD 2010c

Countries of Operation			
Central Europe and Baltic	South-eastern Europe	Eastern Europe & the Caucasus	Central Asia
Croatia	Albania	Armenia	Kazakhstan
Czech Republic	Bosnia and Herzegovina	Azerbaijan	Kyrgyz Republic
Estonia	Bulgaria	Belarus	Mongolia
Hungary	FYR Macedonia	Georgia	Tajikistan
Latvia	Montenegro	Moldova	Turkmenistan
Lithuania	Romania	Ukraine	Uzbekistan
Poland	Serbia		
Slovak Republic	Other Countries		
Slovenia	Russia		
	Turkey		

Source: EBRD 2010b





## Annex E CEB Ownership

Ownership	
Albania	Lithuania
Belgium	Luxembourg
Bosnia Herzegovina	Malta
Bulgaria	Moldova
Croatia	Montenegro
Cyprus	Netherlands
Czech Republic	Norway
Denmark	Poland
Estonia	Portugal
Finland	Romania
France	San Marino
Georgia	Serbia and Montenegro
Germany	Serbia
Holy See	Slovak Republic
Hungary	Slovenia
Iceland	Spain
Ireland	Sweden
Italy	Switzerland
Latvia	The former Yugoslav Republic of Macedonia
Liechtenstein	Turkey

Source: CEB 2010b